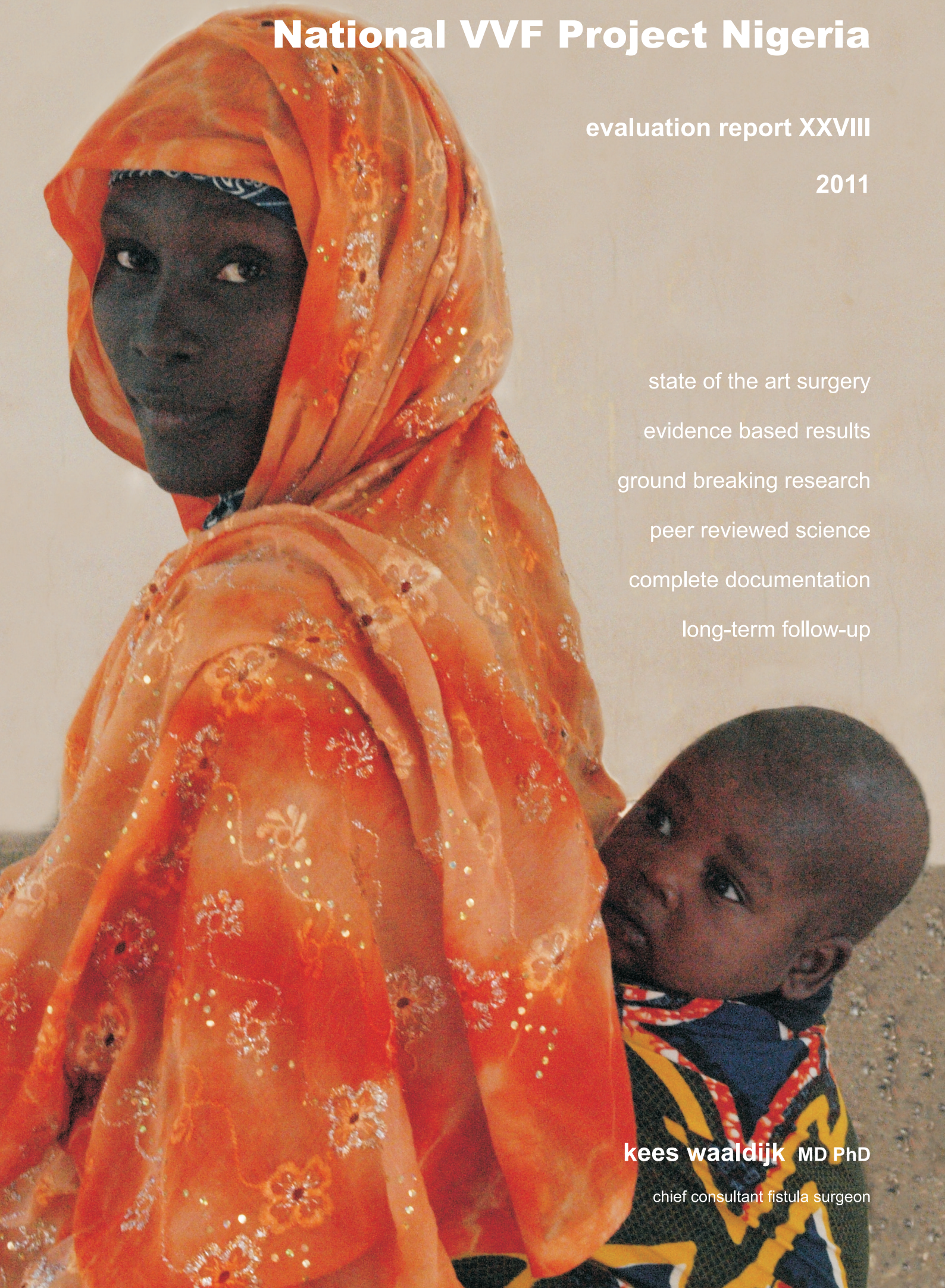
National VVF Project Nigeria

evaluation report XXVIII

2011



state of the art surgery

evidence based results

ground breaking research

peer reviewed science

complete documentation

long-term follow-up

kees waaldijk MD PhD

chief consultant fistula surgeon

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paris

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babbar ruga national fistula teaching hospital
katsina
n i g e r i a

National VVF Project Nigeria

evaluation report XXVIII

2011

Nigeria

Ebonyi State University Teaching Hospital
ABAKALIKI

Special VVF Center
B/KEBBI

Faridat Yakubu VVF Hospital
GUSAU

General Hospitals
HADEJIA - JAHUN

Laure Fistula Center
KANO

Babbar Ruga Fistula Hospital
KATSINA

Federal Medical Center
NGURU

Maryam Abacha Hospital
SOKOTO

Kofan Gayan Hospital
ZARIA

République du Niger

Centre Hospitalier Départemental
MARADI

Hôpital National
NIAMEY

Maternité Tassigui
TAHOUA

Maternité Centrale
ZINDER

kees waaldijk MD PhD

the (surgical) management of the obstetric fistula has to start the moment the leaking of urine becomes manifest

no need to become an outcast

the immediate management by catheter and/or early closure is highly successful and will prevent the woman from becoming an outcast

the best way to treat the whole patient is by closing the fistula

do not waste time, energy and money on things which make no sense
concentrate on the most important thing: close the fistula

previous repairs, scar tissue, vagina strictures etc
do not influence the outcome of surgery

only surgical principles and surgical techniques with

the surgeon being the most important

in der beschränkung zeigt sich der meister

the minimum has to be done to the best of knowledge, experience, skills and conscience

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pelvis

foreword

working in isolation and without high-tech is not easy but clinical examination (a gift lost in the industrialized world) gives the privilege of studying the **complex obstetric trauma** in all its aspects with theoretic and practical solutions for the whole world

slowly things we have been propagated are getting a broader attention and we trust this trend will continue

documentation and reporting by professionals about their work are essential tools in assessing and evaluating processes and projects

this report is no 28 in a series of consecutive annual reports since the author started his obstetric fistula work from scrap in december 1983

it gives an impression of what has been done during the year 2011, more is not possible, in terms of (surgical) management of the obstetric fistula with evidence-based results, in terms of training, in terms of workshops, in terms of politics etc

besides this, it gives the overall figures over the 28-year period 1983-2011

the enormous number of pateints treated and the rare complete documentation of everything combined with excellent evidence-based result in long-term follow-up gives this project the authority to tell sensible things about: classification, operation techniques, training materials, research, training of all kinds of (para)medical professionals, setting up vvf-repair and vvf-training centers etc

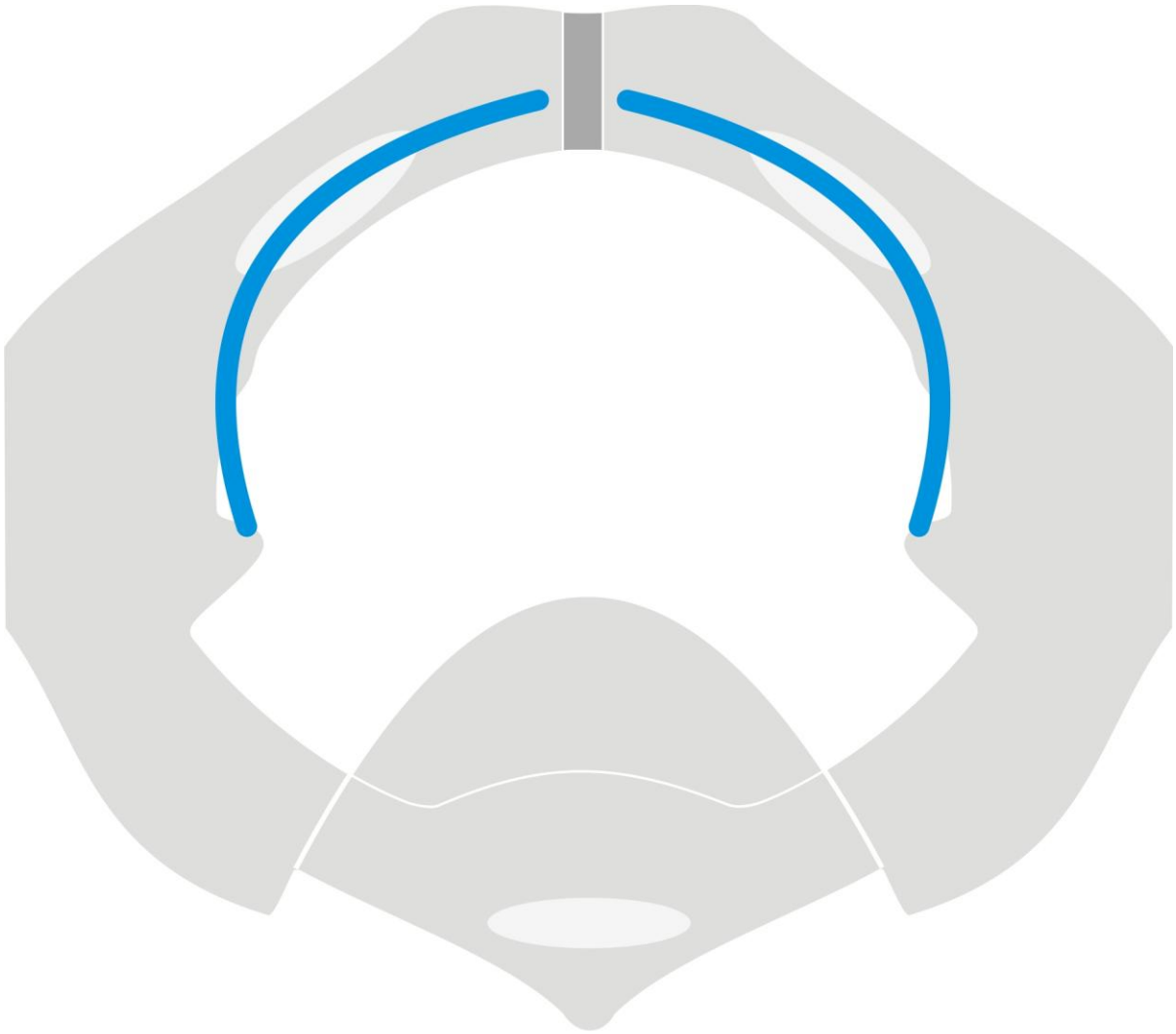
tjhere is no need to speculate or assume certain things without any proof using complicated statistical methods which nobody understands, just analyse the figures using common sense and it becomes clear

if the findings differ from other opinions it is because this report is all about original work by professional surgeons in the field using objective parameters and not a so-called analysis by verbal surgeons in the usa of “fabricated data” as stolen from the fieldworkers

lastly, since we consider our work public domain anybody in the world is welcome to see for him(her)self what is being done in the project; nothing beats transparancy

the importance of training and (training) workshops are being stressed together with the stress upon the trainer

updates of existing materials have been used to show the gradual development



arcus tendineus fasciae = atf

executive summary

at the **54th national health council of Nigeria** babbar ruga hospital was nominated as the national fistula hospital for treatment, training, research and documentation; as such the responsibility for the center will shift from katsina state government towards the federal government in the near future

the **strength of the program** is that everything is **evidence based** by meticulous documentation, extensive database, prospective research, individual follow-up over years and consequent analysis of the results according to scientific parameters

there were many and long-lasting strikes throughout the year affecting our project

during the year a total of 2,502 VVF/RVF-repairs were performed in the project making **a grand total of 37,084 repairs**

during the year a total of 28 doctors and 28 nurses attended our training programs enacting the guidelines of the global competency-based international manual making **a grand total of 806 trainees: 375 doctors, 360 nurses/ midwives and 71 other persons**

during the year 10 workshops, of which 5 especially designed for training, were executed making **a grand total of 46 workshops**

scientifically, the classification of vvf/rvf, the theoretical insight in the pelvis (floor) anatomy and the operation techniques as based upon reconstructive principles with their excellent results proved to be of evermore value

the first number of the international journal of obstetric trauma ijotr was published on-line giving fieldworkers the opportunity to report about their personal experience

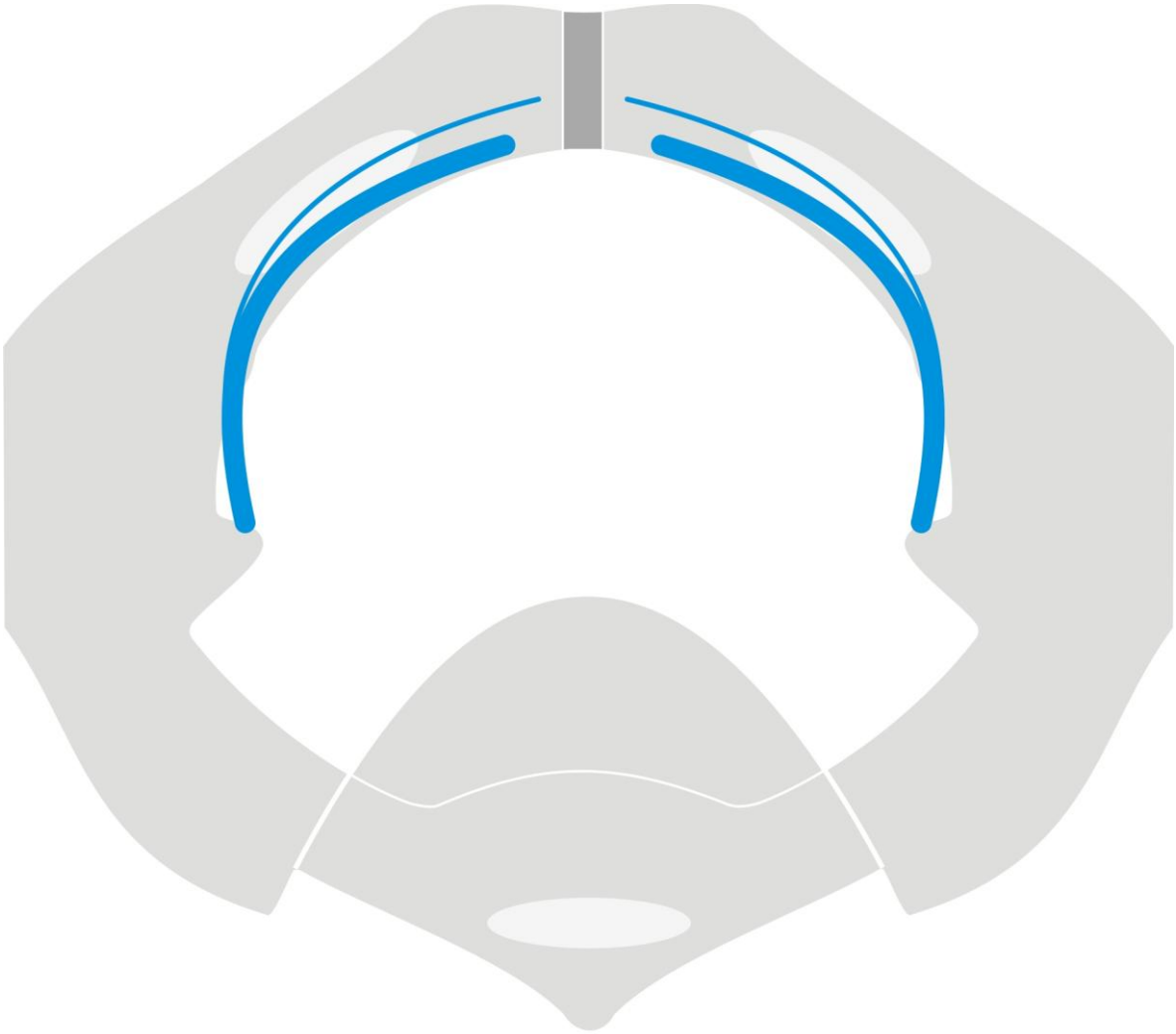
we considered katsina, kano and zaria as our core centers with an inter-center distance of up to 250 km and the other centers more as the periphery with a distance ranging from 450 to over 1,000 km

a **holistic approach** is evidence-based possible as shown in kofan gayan hospital in kaduna state

the whole project is government owned; as such 95% is being financed by the respective state governments and by the federal government

however, it would not have been possible to execute the whole programme without the help of **waha-international** our sponsor for the running costs not covered by the government

it has to be stressed that these achievements are only due to **teamwork** and the **combined efforts** by all the doctors, nurses and other personnel in all the centers



arcus tendineus levator ani muscle = atl

evaluation report XXVIII

introduction
the obstetric fistula is as old as mankind and constitutes a social disaster of the highest order; due to the continuous urine leakage with offensive smell these patients are ostracized from their own community if nothing is done and loose all dignity, as a woman and as a human being, with progressive downgrading medically, socially, emotionally and mentally
the variety of the complex trauma of the obstetric fistula is enormous: from a minute fistula with minimal tissue loss to a cloaca in an empty pelvis with extensive intravaginal lesions and (sub)total loss of all the intrapelvic tissues, extravaginal lesions, urine-induced lesions, neu-rologic lesions and systemic lesions
the only rehabilitation into society is by **successful closure** of the fistula; however, this is not simple considering the extent and the immense variety of the trauma
though prevention of the obstetric fistula is not possible for another century, **prevention of the social disaster** is very well feasible by the **immediate management** by catheter and/or early closure; **no need to become an outcast**
this VVF Project aims to have an impact by providing a VVF-repair service, by establishing VVF centers, by training all kinds of doctors, nurses and paramedical personnel and by providing training materials with the emphasis on keeping it simple, safe, effective, feasible, sustainable and payable under African conditions

philosophy of the project
to provide a professional service concentrating upon the immediate (surgical) management of the obstetric fistula patient
to bring the service towards the patients which means multiple “small” repair centers within their own community throughout Africa and not a single white elephant in the capital
to work for or in close collaboration with the government in order to have an impact upon the obstetric fistula as a major public health problem
to ensure optimal comprehensive care: repairs by the surgeon and rehabilitation if needed by the social workers in close cooperation
to concentrate on the repairable fistulas and especially on the immediate management as a priority considering the scarcity of human resources, finances and available infrastructure
to make a clear statement during the whole management process about further surgical inter ventions; it does not make sense to operate forever on the incurable patients
to demarcate the responsibilities: once the surgeon has done his job <closure of the fistula to the best of his knowledge, conscience and expertise> in the end it is the patient herself who is responsible for her life; the surgeon is just the surgeon, nothing more; and the surgery alone consumes all his energy

long-term objectives
to establish a lasting VVF service with ultimately the total eradication of the obstetric fistula, first in Nigeria but later on also in the rest of Africa and the whole world
to keep the existing expertise available for present and future fistula surgeons

short-term objectives
to further upgrade the repair and training services in the existing centers and to start new centers; masterplan: to establish a VVF-repair center in each of the 36 states of Nigeria and to have a VVF-training center in each of the 6 geopolitical zones of Nigeria; with a population of at least 170 million people
to train doctors, nurses and other health personnel in the complicated (surgical) management of the obstetric fistula
to produce training materials and surgical handbooks with in-depth description of anatomic tissue losses, classification of vvf and rvf, description of continence mechanisms, immediate management, step-by-step operation techniques of fistula and (postrepair) intrinsic/stress incontinence etc
to conduct clinical scientific research, to establish a comprehensive database and to prepare evidence-based scientific articles

achievements

individual VVF-repair centers
during the period 1984-2011 we were instrumental in establishing and maintaining **9 vvf-repair centers in nigeria and 4 in république due niger; and** in establishing **2 function ing vvf-training centers in nigeria**
our efforts to set up a new center in ningi in bauchi state failed

activities
there were many and long-lasting strikes during the year, especially in katsina state, which affected/obstructed our work
a series of intensive training workshops were executed in katsina, kano and abakaliki

surgery
over the year a total of 2,502 procedures were performed in the 13 different centers making
grand total of 37,084 operations: 33,646 VVF-repairs and 3,438 RVF-repairs

postgraduate training
over the year a total of 28 doctors and 28 nurses/midwives were trained making a
grand total of 806 persons: 375 doctors, 360 nurses and 71 other persons

workshops
the consultant surgeon + team participated in 10 workshops in katsina, kano, nguru, sokoto, birnin kebbi, maradi and zinder making a
grand total of 46 workshops

research
this is a continuous process; the intention was, is and will be to make complicated things simple, safe, effective, feasible, sustainable and payable under African conditions sticking to reconstructive surgical principles
… and we were able to develop **evidence-based solutions for each and every problem**
our best contribution is the **immediate management** by catheter and/or early closure preven ting the woman from becoming an outcast
the scientific classification of vvf/rvf becomes ever-more valuable the longer we use it

database, documentation and science
a comprehensive database has been developed where the chief consultant has entered his personal obstetric fistula experience consecutively from the very first to the last patient with up to 250 parameters per patient
the chief consultant started with updating his electronic operation reports by drawings and all postoperative check-ups/results in order to place them on-line on the web for everybody to make his own analysis and conclusions

state-of-the-art surgery
each fistula needs its own specific customized approach as based on a careful assessment of the qualitative and quantitative amount of tissue loss: a combination of science and art
based upon a scientific classification state-of-art operation principles and techniques have been developed for each type with **evidence-based prognosis** as to healing & continence

export of expertise to the industrialized world
it is high time to export our evidence-based experience to the industrialized world

funding
basically the project is funded by the Federal Government and by the individual State Go-vern ments but this is not sufficient
further support came from several organizations like service to humanity foundation, usaid-acquire, unfpa, mdg and family care
luckily, we could depend reliably upon our major sponsor for the running costs from 2010 onward in **waha-international**

strength of the project
its **rare meticulous evidence-based complete documentation** by individual electronic systematic examination and operation reports, electronic database with almost 4,000,000 entries, real prospective research, more than 150,000 digital and other photographs, some 50 hours of digital video takes of operation techniques, long-term follow-up over years, real scientific classification and 28 annual reports etc etc **for the whole world to see**

conclusion
though there is continuous improvement in the quantity and quality of this project in terms of service, training and research there is a long and difficult road in front of us
to move things forward the major aid organizations have to concentrate upon setting up their own centers in places where there is no service instead of invading existing projects abusing the obstetric fistula for their main aim/goal, i.e. hidden agenda of family planning

prevention
why are the major aid organizations, the governments and the general public **not** interested in establishing a network of functioning obstetric units ???
verbal propaganda has not prevented/cured a single obstetric fistula though it has generated lots of money to do so ??however, what has happened to the pots of money??

kees waaldijk MD PhD
chief consultant surgeon
31st of December 2011

fistula surgery 1984-2011

	ebonyi		jigawa		kaduna		kano		katsina		kebbi		sokoto		zamfara		yobe		rép niger		
	vvf	rvf	vvf	rvf	vvf	rvf	vvf	rvf	vvf	rvf	vvf	rvf	vvf	rvf	vvf	rvf	vvf	rvf	vvf	rvf	**total**
1984	-		-		-		-		83	6	-		-		-		-		-		89
1985	-		-		-		-		196	20	-		-		-		-		-		216
1986	-		-		-		-		260	18	-		-		-		-		-		278
1987	-		-		-		-		318	7	-		-		-		-		-		325
1988	-		-		-		-		353	31	-		-		-		-		-		384
1989	-		-		-		-		464	21	-		-		-		-		-		485
1990	-		-		-		222	25	416	29	-		-		-		-		-		692
1991	-		-		-		248	17	195	4	-		-		-		-		-		464
1992	-		-		-		348	27	529	34	-		-		-		-		-		938
1993	-		-		-		416	35	488	62	-		-		-		-		-		1,001
1994	-		-		-		373	43	496	45	-		42	-	-		-		-		999
1995	-		-		-		373	51	537	51	-		161	11	-		-		-		1,184
1996	-		86	-	-		311	37	562	60	41	-	98	5	-		-		66	2	1,268
1997	-		211	4	-		295	38	513	55	107	2	181	14	-		-		33	2	1,455
1998	-		185	5	42	4	278	28	416	60	37	4	288	34	30	6	-		43	4	1,464
1999	-		30	3	37	3	280	36	441	62	80	5	238	12	64	3	-		49	2	1,345
2000	-		204	7	102	7	283	41	420	60	108	4	134	16	102	5	-		69	7	1,569
2001	-		320	27	80	1	415	41	515	55	98	4	157	9	65	5	-		74	5	1,871
2002	-		383	26	44	2	464	49	453	41	113	3	144	7	42	3	-		82	3	1,859
2003	48	5	245	15	39	1	376	52	475	51	96	4	151	7	35	4	-		56	3	1,663
2004	24	2	159	17	59	5	410	33	496	64	65	2	119	6	22	-	-		115	8	1,606
2005	12	-	117	9	31	4	507	39	525	47	208	5	303	22	145	3	-		79	6	2,062
2006	10	2	5	-	65	19	368	91	508	83	156	5	176	17	147	2	-		161	8	1,823
2007	11	1	61	3	114	4	510	97	602	117	170	6	90	5	166	2	-		150	5	2,114
2008	75	3	83	5	146	8	555	59	584	89	168	7	159	7	175	3	37	4	164	15	2,346
2009	180	14	225	7	80	5	538	195	390	198	172	5	90	5	65	1	23	6	175	12	2,386
2010	255	16	391	25	71	6	509	51	484	83	156	4	174	14	40	1	46	3	173	11	2,513
2011	299	25	375	18	104	14	533	54	527	65	99	5	165	6	15	1	17	1	168	11	2,502
total	**914**	**68**	**3,080**	**171**	**1,014**	**83**	**8,606**	**1,134**	**12,252**	**1,518**	**1,874**	**65**	**2,870**	**197**	**1,113**	**39**	**123**	**14**	**1,657**	**103**	**36,901**

total VVF-repairs and related operations: **33,503** + in workshops 143 = **33,646**
total RVF-repairs and related operations: **3,398** + in workshops 41 = **3,438**
grand total 37,084

success rate at VVF closure: 90% per operation at early closure: 95% per operation
success rate at RVF closure: 85% per operation
wound infection rate: < 0.2% postoperative mortality rate: < 0.2%

final success rate (after one or more operations): > 97%

final severe **incontinence rate** after successful closure: 2-3%

operations chief consultant 1984-2011

	VVF	RVF	total
Nigeria			
ebonyi	73	17	90
jigawa	27	4	31
kaduna	629	110	739
kano	5,855	956	6,811
katsina	9,696	1,423	11,119
kebbi	214	31	245
sokoto	1,170	198	1,368
yobe	95	16	111
zamfara	202	19	221
Rép Niger			
maradi	134	13	147
niamey	103	13	116
tahoua	15	3	18
zinder	247	27	274
Ethiopia			
addis ababa	27	20	47
yirgalem	5		5
gondar	6	1	7
Kenya			
machakos	13	2	15
Tanzania			
dar es salaam	51	7	58
mwanza	14	2	16
Burkina Faso	18	3	21
Pakistan	2		2
Germany	1	4	5
Holland	6	2	8
total	**18,603**	**2,871**	**21,474**

average of more than **750 personal repairs a year** over a **28-yr period**

obstetric fistula training 1989-2011

in sharp contrast with many things, if one wants to learn the **science and noble art of obstetric fistula surgery** this cannot be done in the USA but one has to come to Africa where the action is together with the real expertise in the hands and minds of the few dedicated fistula surgeons

though the majority of the trainees come from nigeria and other parts of africa, we have them also from usa., europe, asia and australia; so from all the 5 continents

however, the training poses an enormous stress upon the trainers; see obstetric fistula surgery training logbook where

for guidelines, the global competency-based training manual has been used during our intensive training sessions

a grand total of 806 doctors, nurses/midwives, other highly educated persons and paramedical staff were trained/attended one of our training programs:

a total of **375 doctors**

a total of **360 nurses/midwives**

a total of **4 other academic persons**

a total of **7 medical students**

a total of **20 paramedical persons**

a total of **40 social workers**

the main question is what exactly do we want: ??quality or quantity??

we hope that the training committee of isofs will evaluate and accredit the capacity of trainers and training centers in the world since it is unfair that few trainers and training centers carry the heavy burden of obstetric fistula training

we are in a continuous process of updating our training materials

however, with our experience it does not make sense to train beginners anymore as that would be a waste of our hard-obtained evidence-based expertise

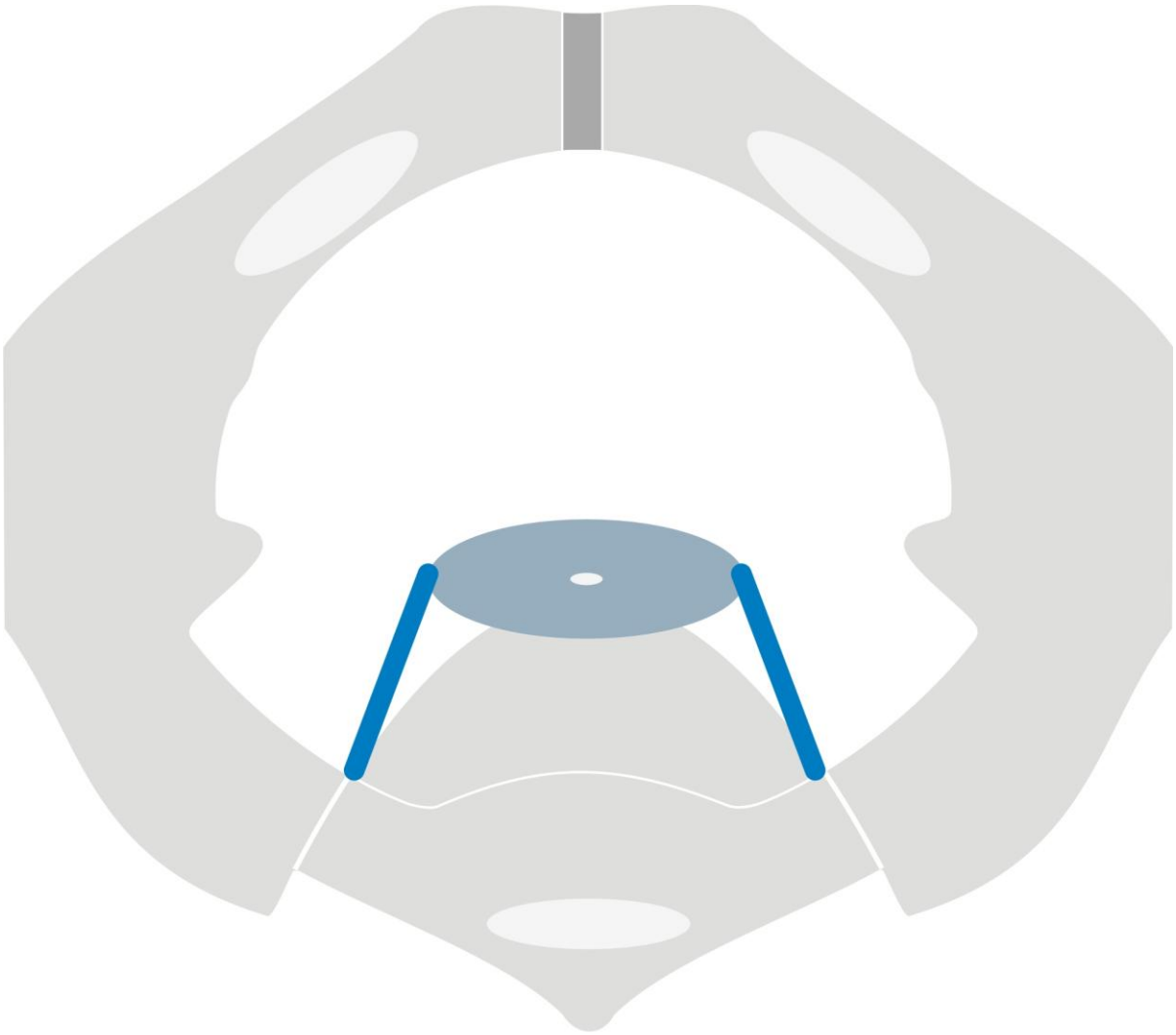
we would like to concentrate upon training of trainers, consultants/specialists who have performed already some 400 repairs

learning a trick which is how we all start is not sufficient since it is solid understanding of the anatomy and physiology of the pelvis, pelvis floor, urine/stool continence mechanism, and the principles of surgery, septic surgery and reconstructive surgery combined with compassion that counts

performance of trainees 1984-2011

Dr Said Ahmed	5,500 repairs
Dr Immam Amir	4,000 repairs
Dr Kabiru Abubakar	3,750 repairs
Dr Marietta Mahendeka	2,800 repairs
Dr Halliru Idris	2,500 repairs
Dr Hassan Wara	1,400 repairs
Dr Khisa Wakasiaka	1,200 repairs
Dr Lucien Djangnikpo	900 repairs
Dr Abdulrasheed Yusuf	750 repairs
Dr Zubairu Iliyasu	750 repairs
Dr Lawal al Moustapha	750 repairs
Dr Abdoulaye Idrissa	750 repairs
Dr Julius KIIRU	750 repairs
Dr Sa'ad Idris	700 repairs
Dr Idris Abubakar	700 repairs
Dr Moses Adeoye	600 repairs
Dr Fred Kirya	600 repairs
Dr Aliyu Shettima	500 repairs
Dr Dantani Danladi	450 repairs
Dr Odong Emintone	450 repairs
Dr Meryl Nicol	400 repairs
Dr Jabir Mohammed	300 repairs
Dr Aminu Safana	150 repairs
Dr Isah Shafi'i	150 repairs

other trainees: no data available



cervix with sacrouterine ligament = sul

National VVF Project Nigeria

obstetric fistula surgery training

training of 22 doctors and 27 nurses

5 training workshop sessions of 14 days of 4-6 doctors and 4-8 nurses each

under mdg funding

Babbar Ruga National Fistula Teaching Hospital
Katsina

Laure Fistula Center
Murtala Muhammad Specialist Hospital
Kano

kees waaldijk MD PhD

chief consultant surgeon

during the 5 training workshops executed so far
over 66 training days

a total of 384 step-by-step operations have been performed
however, only 12 fistulas suitable for trainees

52 clinical and 48 classroom lectures were delivered

22 doctors and 27 nurses followed our introductory course to
the complex trauma of the obstetric fistula

by the end of the training all the patients in the hospital had been attended to and not a single one was left on the waiting list

stress upon the chief trainer surgeon
800 hours minimum
private teaching, organization, documentation reporting

obstetric fistula surgery training

session 1 + 2 + 3 + 4 + 5

executive summary

considering the short-term 14-day training programme annex workshop this can only be considered as an **intensive exposure** to the **complex trauma of the obstetric fistula** and an **introduction** to the **noble art** of its (surgical) management

each session consisted of 14 consecutive days of recap of the previous day, ward-round, surgery with clinical lectures, questions and answers and classroom lectures, selection of patients and postoperative wardround

at the beginning of the course all the trainees were handed out a cd-rom with 5 books about the obstetric fistula, the global competency-based training manual, a logbook and a questionnaire for active participation, self-study and self-evaluation

since there are 2 operating tables available 2 trainee doctors and 2 trainee nurses were assigned to each table and to one of the 2 operating surgeons

the whole training was executed according to the guidelines of global competency-based training manual

all the trainees were supposed to keep meticulous documentation of what they saw, did and learned in their logbook

on special request by all the trainees spinal anesthesia became part of the training course and all the participants were able to practice

the **good news** is that they were all highly interested, very cooperative and really doing their best to pick up

by the end of the course all the participants had a far better understanding of the complex trauma of the obstetric fistula and its causes and of the urine and stool continence mechanism in the female

the most important lesson they learned was: **immediate** bladder catheterization the moment the leaking of urine becomes manifest

and all of them understood very well that they have to come forward for proper surgical training before they are able to start their own obstetric fistula surgery

the whole training exercise was documented meticulously, e.g. prospective computerized operation reports with prediction as to healing and continence

a **total of 22 doctors** and **27 nurses** attended these sessions, a **total of 384 operations** were performed and a **total of 52 clinical and 48 classroom lectures** were delivered with emphasis on the obstetric trauma in its broadest sense

total time spent by the chief consultant **800 hours private teaching/organization**

obstetric fistula surgery training

first session as pilot

Babbar Ruga National Fistula Teaching Hospital
Katsina

training of 4 consultants and 4 nurses
from monday 30.05 thru sunday 12.06

second session

Laure Fistula Center
Murtala Muhammad Specialist Hospital
Kano

training of 4 consultants and 5 nurses
from monday 27.06 thru sunday 10.07.11

third session

Babbar Ruga National Fistula Teaching Hospital
Katsina

training of 4 consultants and 8 nurses
from monday 11.07 thru sunday 24.07.11

fourth session

Laure Fistula Center
Murtala Muhammad Specialist Hospital
Kano

training of 6 consultants/doctors and 4 nurses
from monday 12.09 thru friday 23.09.11

fifth and last session

Babbar Ruga National Fistula Teaching Hospital
Katsina

training of 4 consultants/doctors and 6 nurses
from monday 17.10 thru friday 28.10

obstetric fistula surgery training

introduction

as based on our 35,000 repairs with evidence-based success of 97-98% at closure and the training of 350 doctors and 340 nurses since started in 1984,

we were approached by mdg to train 20 doctors and 20 nurses in the basics of the obstetric fistula and its (surgical) management during a training programme of 14 days

we set out a strategy for this novel type of training to make the most of it and we came up with an intensive training course of some 120-140 hours of theoretical lectures and practical surgical sessions whereby the quality to our patients and to our training will be guaranteed; see annexes

it should be considered an intensive exposure as an introduction to the complicated complex trauma of the obstetric fistula and its (surgical) management

for this we will follow the internationally approved/accepted global competency-based training manual as state-of-the-art guidelines

throughout the training course the accent will be on the quality and not on the quantity; for this we plan 3 operations per operating bed for 12 days; that will be 72 operations during the 2 weeks of training; or a total of 360 operations during the 5 sessions of 2 weeks

continuous monitoring will be provided by mdg, fmoh and ktmoh

a comprehensive evaluation report will be produced at the end of each 2-week training session and for the whole training programme

obstetric fistula surgery training

training module etc etc

day-to-day outline of the progamme

day 1
opening ceremony, introduction of participants, explaining the training to all participants and questionnaire for self-evaluation, tour of the center, introductional lecture about the obstetric fistula in its broadest form

day 2-13

8.00 to 9.00	wardround
9.00 to 14.00	surgery, examination etc
14.00 to 1500	lunch etc
15.00 to 17.00	theoretical lectures, questions & answers about procedures etc
17.00 to 18.00	wardround

day 14
wardround, ?surgery?, explaining the initial questionnaire for self-evaluation, handing out the certificates, evaluation of the programme by trainers, trainees and sponsors, closing ceremony

content of training
history taking, examination, preoperative care
pre-anesthesia care, spinal anesthesia
step-by-step surgery with explanation of the whole complex trauma of the obstetric fistula customized to the individual patient
postoperative care
health counselling right from the beginning when the patient presents herself

training process
2 operating beds with each a trainer + 2 consultant trainees
chief consultant surgeon as supervising the whole process of training: practically and theoretically

self-study by the participants:
study material for the trainees on their own; before starting each trainee will be given a cd-rom with the following:
(surgical) management of bladder fistula in 775 women in Northern Nigeria; phd thesis; 1989
step-by-step surgery of vesicovaginal fistulas; 1994
obstetric fistula surgery; art & science; 2004
25 years of obstetric fistula surgery; report XXV for the years 1984-2008
national vvf project report XXVII for the year 2010

presurgical examination
to confirm fistula, pudendal nerve function + peroneal nerve function, general health, hydration, blood pressure

spinal anesthesia
3 ml heavy bupivacaine 0.5% at L4/L5
monitoring

examination under anesthesia just before surgery is started
all the obstetric intravaginal lesions to be demonstrated, then based on this the fistula is classified, surgical plan of action outlined and performed/demonstrated and prognosis given as to healing and as to continence in 5% range

questions & answers
after each surgical procedure

classroom lectures:
pelvis and pelvis floor anatomy
urine continence mechanism in the female
stool continence mechanism in the female
the complex trauma of obstetrics in relation to pelvis and pelvis floor
immediate management by catheter and early closure
classification of urine fistulas as related to the obstetric trauma
classification of stool fistulas as related to the obstetric trauma
principles of surgery according to classification with prognosis as to closure and continence
urine incontinence as related to defects in the pubocervical fascia with consequences for continence surgery
genuine urine incontinence as related to defects
prevention of postrepair incontinence with reconstructive steps during the repair
conservative management of postrepair incontinence
reconstructive surgical management of postrepair incontinence
preoperative preparation
the importance of high oral fluid intake pre- and postoperative
spinal anesthesia

data collection and data management
since data are very important in monitoring and the management and the project as a whole, special emphasis will be placed on how to collect which data and how to manage the data

training modules
during the whole training period the isofs-figo-rcog manual will be used as objective standard of international state-of-the-art training in a prospective way also to test the manual in a critical way

training time
since the training will be 10 hours a day for a full 14 days this will amount to 120-140 hours of individual training which is comparable to 4 week-training of 35 hours per week compressed within 14 days

at the very end the same questionnaire will be explained for self-evaluation by all participants

obstetric fistula surgery training

prepared and adapted for
training manual meeting 10th thru 12th august 2011
dar es salaam
tanzania

guidelines

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the obstetric fistula as a major public health problem

the need for training

The obstetric fistula is a major health problem on the rise for which a definite solution still has to be found; some 1,500,000 patients are desperately waiting for operation.
Prevention is a utopia for at least another century since a network of 150,000 functioning obstetric units are needed evenly distributed over the inhabited parts of Africa where day and night an emergency caesarean section can be performed upon arrival of the patient, with an even more concentrated network to detect the first sign of obstructed labor; that is the lesson learned from history in the industrialized world; what about delay in diagnosis of obstructed labor, in decision taking and in transport?
Prevention of the woman from becoming an outcast is very well feasible, even under primitive conditions, by the immediate management by catheter and/or early closure.
Once the fistula patient has become an outcast, rehabilitation is only by successful closure of the fistula which means secondary/tertiary health care.

The best we can aim for at the moment is to spread the expertise how to manage the obstetric fistula confidently within the scarce resources of developing Africa; and once available to keep this expertise where it is needed for as long as needed.
For sustainability reasons, the management of the obstetric fistula has to be simple, safe, effective, feasible, affordable and payable.
However, there are only 2 training centers in the world where systematically doctors, nurses and other health personnel are trained in the management of the obstetric fistula.

Since manpower, expertise, facilities, equipment, training materials and finances are scarce, it will take some time before an impact can be expected.

Some ideas on how to proceed are presented in separate chapters:

obstetric fistula training and trainees

training curriculum

training module

obstetric fistula training center

obstetric fistula repair centers

obstetric fistula rehabilitation

nation-wide obstetric fistula service

obstetric fistula tourism

training of industrialized world

training of non-doctors

Besides this the obstetric fistula has to be integrated within the government health system as a major public health problem with a national program; also (inter)national donor agencies have to be involved

obstetric fistula training and trainees

introduction

In order to cope with the increasing number of obstetric fistula patients in the developing world it is important to train sufficient doctors, nurses and other personnel.
The doctor trainees need at least 10 repairs under strict supervision, from placing the patient on the operating table until the very end of the operation.
Future trainers need personal exposure to the complicated and difficult fistulas in order to train other doctors in the noble art of fistula surgery. They have to become completely familiar with all kinds of fistulas and all kinds of operations.
For nurses and other health personnel it is sufficient to have an intensive exposure to the obstetric fistula combined with practical and theoretical lessons.

different training courses

a. training course for doctors without experience in fistula surgery
b. training course for consultants without experience in fistula surgery
c. follow-up advanced training courses in obstetric fistula surgery
d. training course for future doctor trainers with sufficient experience
e. training course for operation theater nurses
f. training course for pre- and postoperative nurses
g. training course for anesthesia nurses
h. training course for future nurse trainers with sufficient experience
i. refresher courses for nurses
j. training course for supporting staff and other (health) personnel
k. training course for doctors and staff from the industrialized world

requirements of doctors

A trainee must have a surgical experience of at least 3 years in order to learn the basics of obstetric fistula surgery. (S)he does not need to be a consultant but (s)he must be interested in the work and not in the money of the training course.

requirements of future trainers

To become a future trainer, in principle the trainee should be a consultant and have already a personal experience of at least 400-500 repairs and he must be prepared to become a full-time fistula surgeon.

requirements of nurses/midwives or anybody else

A trainee must be working with obstetric fistula patients and be willing to continue to do this. So any trainee should be screened well by his (her) employer and by the sponsoring agency.

duration of training

For doctors without or with low experience in fistula surgery a period of 1.5-2 months will be sufficient if there are enough patients for them to operate upon; after 50-100 personal repairs, they can be trained again for 1 month.
For nurses and other (health) personnel a period of 1 month will be sufficient if there enough patients available.
For future trainers the best would be an initial period of 1 month, then again 2-4 weeks after some 6 month and if necessary again 2-4 weeks after 6 months.

the problem is that fistula surgery looks so simple, so everybody involved in gynecology is a fistula surgeon, and turns out to be so difficult
another problem is that surgery cannot be learned from a textbook or a theoretical lecture or a workshop but only by **performing the surgery oneself under supervision of an expert fistula surgeon** in a sufficient number of patients
however, before starting with the (surgical) management the trainee must learn and understand first the mechanism of obstructed labor, the complex trauma of the obstetric fistula, the complex anatomy of the pelvis and intrapelvic organs and their different tissues, muscles, ligaments etc and the theoretical solutions
once the doctor-trainee masters all the theoretical aspects, his practical training can start and **step-by-step** he has to be taught the (surgical) management of the obstetric fistula
though the nurse-trainee does not perform the surgery, (s)he must be familiar with all the surgical techniques and all the other theoretical and practical aspects

complex trauma of the obstetric fistula
the enormous variety of the obstetric fistula and other intravaginal, intrapelvic, extravaginal and sytemic lesions due to obstructed labor

anatomy of the pelvis
the pelvic bones, the intrapelvic organs and their relation

urine/stool continence mechanism in the female
anatomy + physiology of continence

history taking
parity, duration of leakage, previous repairs etc

examination of obstetric fistula patients
inspection, vaginal examination and examination of other lesions

classification of the obstetric fistula
based on the quantitative and qualitative amount of tissue loss of the continence_ closing mechanism with consequences for the operation technique and prognosis

immediate management of the obstetric fistula
by catheter and/or early closure

preoperative preparation
laboratory, high oral fluid intake, hygiene

spinal anesthesia
technique, monitoring and complications

surgical techniques
basic techniques for the different fistula types and their adjustment for that specific fistula + other techniques for stress incontinence, bladder stone, vagina atresia etc

handling of surgical instruments
this is difficult inside the vagina and needs expert coaching

intraoperative complications
ureters, hemorrhage, stool contamination etc

postoperative care
catheter management, high oral fluid intake etc

immediate postoperative complications
anuria, blocked catheter, secondary hemorrhage

continence mechanism in the female
theoretical aspects with practical (conservative and surgical) consequences

management of long-term sequelae
urethra stricture, bladder stone, vagina atresia, secondary amenorrhea

postrepair total urine intrinsic_stress incontinence
bladder drill, urethralization_fasciocolposuspension

how to set up a VVF-repair center
in an existing hospital

how to set up a VVF-training center
in an existing VVF-repair center

counseling
personal hygiene, when to start sexual intercourse, subsequent pregnancies and deliveries

depending upon their theoretical knowledge, their surgical skills and their surgical experience, it is clear that the training of each doctor is highly individual

since it takes 4-6 years to become a consultant surgeon, it is also clear that it takes a long time before one masters the **noble art of obstetric fistula surgery**

during their training course the doctor-trainees can only be taught the basic principles of obstetric fistula surgery, then with ups and downs they have to gather their own expertise by hard work

training is a continuous life-long process which never stops

training module

evidence-based as practiced in the national vvf project nigeria

first
selection of an **obstetric fistula management team** consisting of a doctor, an operation theatre nurse, an anesthesia nurse and two pre- and postoperative nurses who are interested and willing to provide a service for the obstetric fistula patients

second
training of the complete team in an **established obstetric fistula training center** with a high turn-over of patients and a high number of repairs
for the doctor 6-8 weeks initially
for the nurses 4 weeks

third
organizing a 5-day workshop to operate a large number of patients in combination with lectures as co-facilitated by the consultant trainer + team for advocacy_publicity that something can be done and to start the obstetric fistula service in that area

fourth
the team starts working on its own with the simple fistulas which they must be able to handle themselves **confidently** after their initial training

fifth
the consultant trainer + team come from time to time for **on the job training** and to handle the more complicated fistulas and to select more staff for training

sixth
after 50-100 personal repairs, the doctor should come for advanced training to the obstetric fistula training center for 4-6 weeks in order to boost his expertise

seventh
the doctor continues his own surgical program and the consultant trainer + team comes from time to time for further on the job training, to assess the service and to handle the difficult fistulas

eight
at any time the doctor comes further training of 2-4 weeks whenever he thinks he needs more training

ninth
after 250-300 repairs and if feasible and if there is a need, the doctor should come to the training center for further **advanced training** to become a **future trainer**

tenth
at any time, be (s)he a doctor or already a trainer, whenever there is a need, (s)he should appeal and come for further training to the established training center

workshops have low value for the initial training but high value for (more) experienced fistula surgeons on specific topics such as postrepair incontinence and definitely value in advocacy and helping large numbers of patients within a short time.

obstetric fistula training center

introduction
In order to cope with the increasing number of obstetric fistula patients in the developing world it is important to have **functioning training centers** where present and future generations of surgeons can be instructed in the (surgical) management of the obstetric fistula. The variety of qualitative and quantitative lesions of the obstetric fistula is such that they can only be taught the basics. Since it is handwork the trainees need at least 10 repairs under strict supervision; following their training they still can operate confidently only the simple fistulas. However, only 15-20% of the fistulas are fit for the trainees, the rest is too complicated or too difficult.
For nurses and other health personnel it is sufficient to have an intensive exposure to the obstetric fistula combined with practical and theoretical lessons.
Following a simple calculation model the following can be demonstrated.

requirements of the trainer
For a trainer to perform well he needs sufficient experience considering the variety and the difficulty grade of obstetric fistula surgery, i.e. a minimum of 400-500 repairs. Otherwise it would be the blind teaching the lame how to cross the road.
In principle the trainer must be a consultant in order to have sufficient authority within the institution, within the set-up of the (government) health care and within the region from which the trainees are coming.

requirements of supporting staff
Since it is teamwork that counts, also his supporting staff should be of high quality in order to teach the trainees, be it a doctor or a nurse or anybody else, the pre-operative care, the anesthesia, the postoperative care and the patient counseling

requirements of the training center
For a training center to function well there must be sufficient operations, at least 300 fistula repairs a year, i.e. 6 operations per week. With less than 300 repairs it will be difficult to sustain a continuous daily intensive training/teaching programme.
With 300 repairs a year there are only 45-60 operations available for the trainees, or only 1 repair a week.
This would mean that the center can only handle 5-6 trainees a year, and that only 1 trainee can be taught at the same time.
During a training period of 2 months, a trainee will be present at only 55-60 repairs out of which he can perform 9-10 simple repairs himself.
However, some will be lucky and some not since the patients are not coming evenly distributed over the whole year; the same applies to the patients with a simple fistula which can be handled by a trainee.
In principle, the center should be a government-owned or a government-recognized training center where government, mission and even private doctors and nurses can attend the postgraduate courses.

on the job training of residents or other doctors in teaching or other hospitals
This takes a long time and is only possible if the trainer has sufficient experience and the number of patients is enough as explained already.
It would be better to assign the residents to a real obstetric fistula repair or training center for 2 months for an intensive exposure to the obstetric fistula.

obstetric fistula repair center

This should be a separate unit with a separate hostel, a separate ward and a separate operating theater with separate staff for pre-, intra- and postoperative care.

In the beginning it can be integrated within an existing hospital and then one fixed day a week has to be a full fistula operating day (no other operations, neither planned nor emergency); but if the number of operations are more than 150-200 a year a specific VVF center should be built.

As it is a fistula repair center it should concentrate on the surgery only, otherwise the professional surgeon and his professional medical staff are wasting their time: a surgeon and his medical staff are not social workers.

To prevent conflict of interest the hostal annex rehabilitation center should be situated outside the hospital premises, but in the neighborhood.

Once the surgical job has been finished other professional social staff have to take over the rehabilitation.

An effort has to be made to keep things simple with straightforward pre-, intra- and postoperative guidelines.

The one thing that cannot be compromised is a high-quality operating table; except for sharply curved THOREK scissors and sharp DESCHAMPS aneurysm needle no special instruments are needed.

Spinal anesthesia is safe, simple, effective and cheap since it does not need expensive equipment.

For laboratory investigations Hb and serum creatinine would be advisable; urine investigation is unreliable.

X-rays are not required; even if the X_IVP would show abnormalities this does not mean that the patient cannot be operated.

Physiotherapy is something for the rehabilation center but only if fixed contractures have developed; immediate mobilization is the best to prevent them.

The treatment of obstetric fistulas should be free of charge but the patient should bear some of the costs.

In order to bring the service towards the patients **it is better to have multiple small centers than one large center in a country** especially since the action radius of an obstetric fistula repair center is 100-120 km. In planning a nation-wide service this should be taken into account.

obstetric fistula rehabilitation center

Rehabilitation means: prepare/help the patient to take full control of his/her life ... and does not mean: make the patients depending upon the service depriving them of their own responsibilities, that is the wrong approach and has nothing to do with rehabilitation.

The **best rehabilitation** is a **successful repair**; then it will take place spontaneously.

Only the **"incurables"** (after multiple repairs which did not stop the continuous urine leaking, be it a residual fistula or total postrepair urine incontinence) need vocational training in order to earn their own living. Though for these unfortunate girls/women life has ended, someway somehow they have to continue.

This is not a job for the professional surgeon and his professional medical staff but for other **social** professionals. Unfortunately, the social professionals are not or not yet interested.

The best would be a hostel annex rehabilitation center in the neighbourhood of a fistula repair center where the social workers could do their job. This center has to be outside the hospital, otherwise there will be a negative impact upon the functioning of the fistula repair center.

What happens if there is no separation of hospital and rehabilitation services is the following. Since the women have to survive, males come at night and visit them in the center (for some males the smell of urine seems to be an aphrodisiac; as well the women are highly attractive!), some of them fight over one woman and males and females fight the staff if they are trying to prevent them from entering the compound and break the wall if the gate is closed; many times the police has to intervene. However, if the police is asked to prevent this from happening, they take the patients as girlfriends and it is even more difficult to reverse this. As well the old patients are instructing the new patients in all types of behavior which is not in line with the hospital instructions. They have their own ideas about the pre- and postoperative management and some of them even sell native medicine to the new patients with terrible consequences. They claim the best food and the best places in the hostel for which they befriend the male staff of the hospital or bribe the female staff. That is all fine in the struggle for survival and everybody is free in doing what (s)he has to do, but for smooth running of hospital services such as obstetric fistula surgery it is not ideal.

The hostel_rehabilitation center has to be in the neighbourhood of the fistula repair center for quick communication and smooth cooperation.

To avoid conflict of interest the fistula repair center has to come under the Ministry of Health and the hostel annex rehabilitation center under the Ministry of Social Welfare; however, there must be good cooperation.

However, do not convert these rehabilitation centers into **fistularia** since anybody must take the full responsibilities of his/her own life

nation-wide obstetric fistula service

any country with a high prevalence of the obstetric fistula should make an effort to organize and execute a nation-wide feasible and sustainable obstetric fistula service, especially since it will take another century to prevent it from occurring

in order to bring the service towards the patients (and not the other way round) and taking into account the action radius of an obstetric fistula center of 100-120 km the following is suggested to create a nation-wide network of functioning centers
one big referral center for the whole country (where patients have to travel long distances, the awareness that something can be done is low and the referral system is not functioning) is not the ideal set-up

national masterplan with national program
developed and coordinated by the national ministry of health; with its own budget

regional masterplan with regional program
developed and executed by the regional ministry of health; with its own budget

national obstetric fistula training center(s)
at least one training center and if needed more training centers depending upon the size of the country and the distribution of the health services
if the country has been divided into large geopolitical regions, each region needs its own training center
each center has to be an **independent** obstetric fistula hospital (not a subunit of the gynecologic department) to ensure that the patients and the trainees get **first priority** without interference by others
however, each center should be liaised with the (university) teaching hospital

regional obstetric fistula repair centers
each region, be it state, province or département needs its own obstetric fistula repair center, preferably in the capital of the region
this repair center should be an **independent** obstetric fistula hospital where only VVF and RVF repairs and related operations are performed; so no interference by others for gynaecologic operations or emergency operations such as caesarean section

incentives for the personnel
since there is no money to be made in the management of the obstetric fistula somehow the highly qualified and educated personnel have to be compensated, financially and in career planning; otherwise they will leave

step-by-step implementation
things cannot be changed overnight but an effort has to be made so that within 2-5 years each country has its own functioning service in place and then sustain it

training curriculum for residents in obstetrics and gynecology
actually each and every gynecologist should have ample knowledge of the obstetric fistula and be able to perform the simple repairs as that is his job; however, during their training they have not been exposed sufficiently and now it is too late
therefore it would be better for the present and future residents to have an **intensive exposure** to the obstetric fistula of 2 months in either a repair or a training center instead of exposure to urology and their official curriculum should be adjusted

obstetric fistula tourism

or as a hausa proverb says
the king in one country is a beggar in another

report american sugeons' visit to sokoto from 21/9- thru 29/9-97

for political reasons and because there was a lot of money to be shared locally amongst the organizers, the usual thing in africa, a team of american surgeons (gynecology/surgery/plastic surgery/anesthesia) from a University Teaching Hospital came to maryama abacha hospital to perform obstetric fistula surgery

though in their own surroundings they are experts, their experience in obstetric fistula surgery was **zero** simply because there are no obstetric fistulas in america

the chief consultant fistula surgeon offered to help and was willing to train them but they were so **arrogant** that they refused to talk to him since they **knew it all**

so they teamed up with some nigerian doctors who did not have the slightest clue as well; in total they were nine: dr e, dr b, dr h, dr k, dr k, dr b, dr g, dr v and dr b

to **show off** they started with the most complicated patients who had been operated already once or even more times

they worked in two teams from 9.00 am up to midnight since operation time got out of hand: from a minimum of 2 hours up to 7 hours!

on the very first day one patient died immediately afterwards, and her name was not entered in the operation register whilst all the documents disappeared (american **litigation**)

after 3 days the resident doctors who came to **"admire"** their surgical skills walked out on them though in a polite hausa way

after 6 days the remaining patients refused to be operated since they are highly intelligent and noticed that none of the operated patients were ok but started to leak already after 1-2 days; as well some of the staff advised them so

so the last two days only 1 desperate patient a day came forward to be operated

they were only interested in the surgery and did not even bother about postoperative care and follow-up and left the mess for the chief consultant and his team to be sorted out

the **'result'** of their **arrogance** and **obstetric fistula analphabetism** is the following:

total number of patients operated:		32 patients
outcome:	**early breakdown_leaking:**	**30 patients**
	not leaking (ureterosigmoidostomy):	**1 patient**
	postoperative mortality:	**1 patient**

it is left to the reader to draw his/her own conclusions about the **value of obstetric fistula tourism**

list of obstetric fistula patients operated from 21/9- thru 29/9-97

patients name/town	op date	approach	outcome
h m mabera	21/9-97	abdominal	leaking
h m gandi	21+27/9-97	abdominal	leaking
z l sabon_birni	21/9-97	vaginal	leaking
? ? ?	21/9-97	abdominovaginal	died
a a yabdo	22/9-97	vaginal	leaking
a m kwana	22/9-97	abdominal	leaking
a m ginga	23/9-97	abdominal	leaking
f m shuni	23/9-97	abdominal	leaking
h m sokoto	23/9-97	abdominal	leaking
f g katami	23/9-97	abdominal	leaking
a l kura	23/9-97	abdominal	leaking
i g bodinga	23/9-97	abdominal	leaking
z u achida	23/9-97	abdominal	leaking
r m gwadabawa	24/9-97	abdominal	leaking/infected
a s moriki	24/9-97	vaginoplasty	leaking
s m wurno	24/9-97	vaginal	leaking
s a gwadabawa	24/9-97	abdominal	leaking
k m gada	24/9-97	abdominal	leaking
r m samamum	24/9-97	abdominal	leaking/infected
n m gwadabawa	24/9-97	abdominal	leaking
a y chimola	25/9-97	abdominal	leaking
i i hamali	26/9-97	abdominal	leaking
h b dankaiwa	26/9-97	vaginal	leaking
a u dange	26/9-97	vaginal	leaking
a m dange	27/9-97	abdominal	leaking
h l dange	27/9-97	abdominal	leaking
a i ilorin	27/9-97	**ureterosigmoidostomy**	**ok**
r i gwadabawa	27/9-97	vaginal	leaking
m h binji	27/9-97	abdominal	leaking
a a sokoto	28/9-97	vaginal	leaking
h b mabera	29/9-97	vaginal	leaking

after long deliberations the author decided to come out with this detailed report about **obstetric fistula tourism** since this has been repeated several times by others and it seems that some groups/organizations are planning to make the same mistake; some even think of involving the tourists in **training**

however, neither the patients nor the tourists are helped by such an exercise

it is laudable to help these poor patients but then **make sure one is trained properly** by expert fistula surgeons who are **highly willing to do so!**

kees waaldijk, MD PhD
chief consultant fistula surgeon

april 2005

training doctors and staff from the industrialized world
whilst educating the organizations

there are many doctors, nurses and other persons in the industrialized world who are very much willing to help the obstetric fistula patients in the developing world; for this they are volunteering to spend their own money (expensive air travelling, accommodation, feeding, no income), their time and their expertise; however, **no** experience with the obstetric fistula

there are organizations in the industrialized world willing to sponsor initiatives that will contribute to the management of the obstetric fistula patients by sending teams to operate them thinking that an expert surgeon in europe, asia, australia or united states is also an expert fistula surgeon in africa; however, they are **wrong**

it would be ridiculous not to make use of good-willing individuals and good-willing organizations; so we have to **educate** the organizations and we have to **train** the volunteer surgeons and staff **in the (surgical) management of the obstetric fistula** under rather primitive conditions in an **african** hospital

criteria for doctors and staff
they must have been working in a developing country for some years and willing to spend regular time (once or twice a year some weeks) in the future in a developing country; otherwise it is a waste of valuable time by the expert fistula surgeon

in nigeria the following procedure is used

first
initial visit of 2-4 weeks
teaching the complex trauma of the obstetric fistula, inspection and examination of the obstetric fistula patients and their lesions, spinal anesthesia and some personal **vaginal** repairs depending upon how long they stay
since most of them are already expert surgeons they do not need the intensive coaching of instrument handling
at the end they all say they never knew and never realized how complicated the surgical management of and how extensive the obstetric fistula trauma is

second
after their visit they know which fistulas they can handle themselves and which not, and now they can start with their surgery in order to gather their own expertise

third
follow-up visit of 2 weeks
after some 50 repairs they come back to discuss their experience and to upgrade their skills, if they feel they need it

fourth
they continue their work also operating the more complicated fistulas, and at any time they can come back if there is a need for **advanced-level fistula surgery**

fifth
follow-up visit of 2 weeks
actually one highly experienced urologist wants to come back for the fourth time

surgical training of non-doctors or even non-medical persons discrimination and hypocrisy

there is a debate over the training of clinical assistants or even non-medical persons

first, do not start a practice in africa which one never would accept in europe or the usa; are africans not human beings who deserve the best

then, obstetric fistula surgery is the most difficult and complicated surgery i ever encountered in my life; so it needs the right education to become a doctor, the right surgical training to become a specialist and then the right postgraduate training to become a fistula surgeon

this reflects in the statement by some organizations that a programme is successful if 85% closure rate can be achieved

however, what kind of philosophy and surgery is that; we should aim at 100%

learning a trick is not sufficient; one needs full understanding of the complicated anatomy and physiology of the pelvis, pelvis floor, urine/stool continence mechanism in the female etc etc; one has to know exactly what has been lost due to pressure necrosis; how to perform reconstructive surgery if the normal functional anatomy and pathophysiology are not known

only then with expert surgical skills one may be able to handle the obstetric fistula with care to full satisfaction of the patient and the surgeon

if a non-doctor is attending a postgraduate surgical course (s)he will get a licence to perform surgical malpractice

why not sponsor this non-doctor to become a real doctor first and then only if (s)he has achieved this send him/her for **postgraduate** training in the **noble art** of obstetric fistula (surgical) management; same practice as in the industrialized world

discrimination: what is good for africa is not good enough for europe/usa

lastly, the people who propagate this practice are not believing in it themselves as i have never seen a non-doctor and/or non-medical “fistula surgeon” been appointed as chief medical director of their hospital (with all the financial benefits)

(s)he can be trusted with the responsibility of invasive surgery and it is good for fund raising, but (s)he **cannot** be trusted with the administrative/financial responsibility of chief medical director **what a hypocrisy**

kees waaldijk, MD PhD august 2011

fistulas for beginners
objective characteristics and setting standards as based on evidence

introduction

due to vocal statements by verbal surgeons in the industrialized world and political statements by the major aid organizations, there is a lot of misunderstanding about obstetric fistula surgery and training such as the patient can be cured by a simple operation and beginners need rapid hands-on training for a short period

however, **there are no simple fistulas** considering the complex trauma of the obstetric fistula and the enormous variety in tissue loss; it only may look simple in the hands of the few experienced fistula surgeons

still one has to start somewhere and there are vesicovaginal fistulas suitable for beginners as based on objective findings as to size, location, tissue quality, mobility of fistula/tissue/cervix, width of pubic arch, depth of vagina, concomitant rectovaginal fistula/sphincter ani rupture, previous repairs etc; all the characteristics of a small type IIAa fistula are outlined in order to help trainers and trainees

second, the first priority in training is to teach and demonstrate the anatomy of the pelvis floor, the obstetric pressure gradient within the pelvis, the variety in tissue loss, a systematic examination of these lesions, a classification as based on the quanti tative/qualitative amount of tissue loss and the different solutions as customized to that specific fistula

only if the trainer and trainee have full understanding of all the theoretical/practical aspects, then the last thing is hands-on training under direct supervision according to the basic principles of general, urologic, gynecologic, colorectal, septic and especially reconstructive surgery to reconstruct the functional anatomy all in order to restore the normal physiology; this is not something for inexperienced surgeons

objective criteria

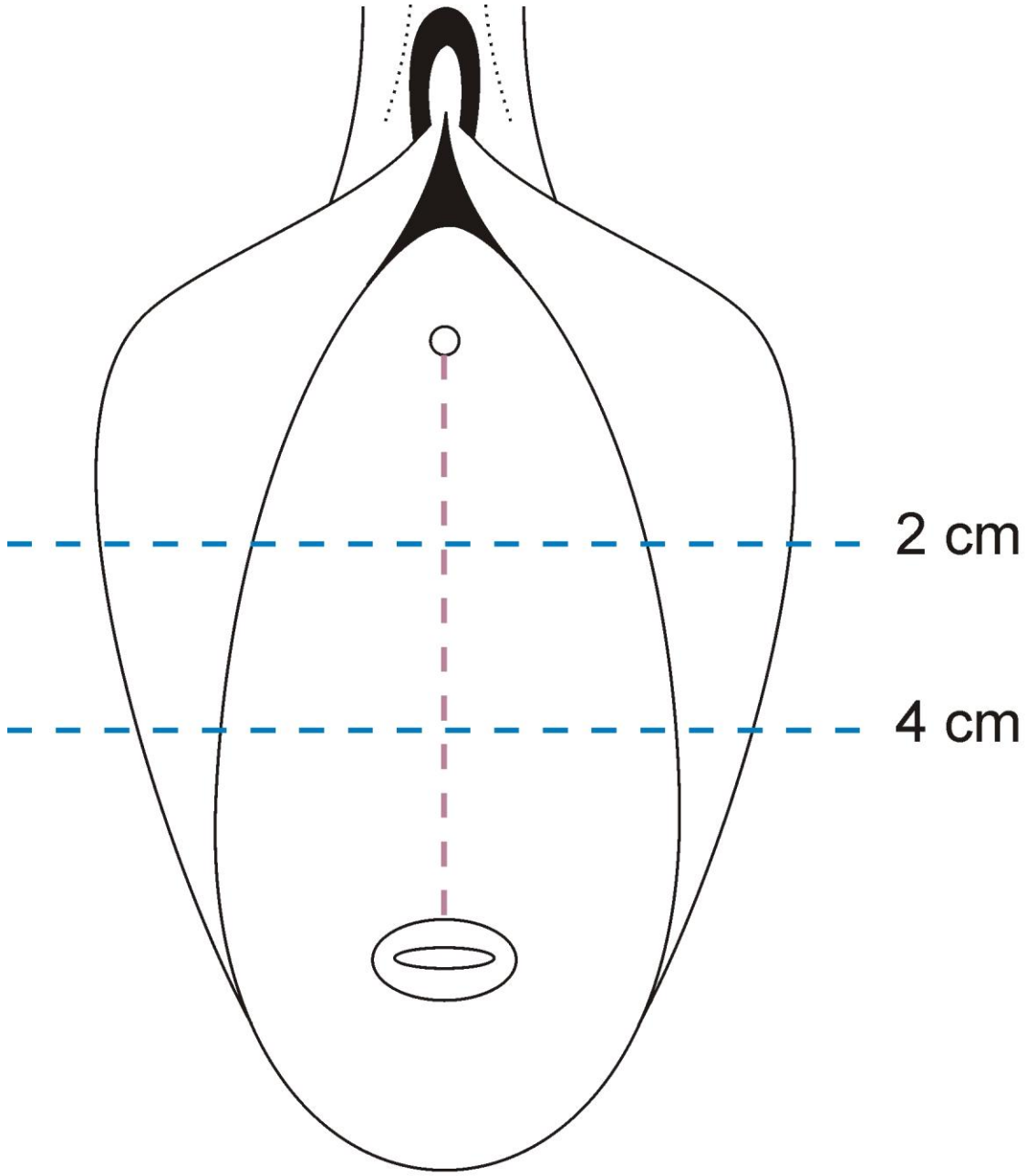
based upon an extensive experience of more than 21,000 repairs with excellent evidence-based results in closure of the fistula after one or more operations in more than 98% with severe incontinence in only 2-3% there are some fistulas which are suitable for beginners; the objective characteristics of which are outlined in table I with drawings in fig 1 and 2

table I

characteristics of fistulas for beginners

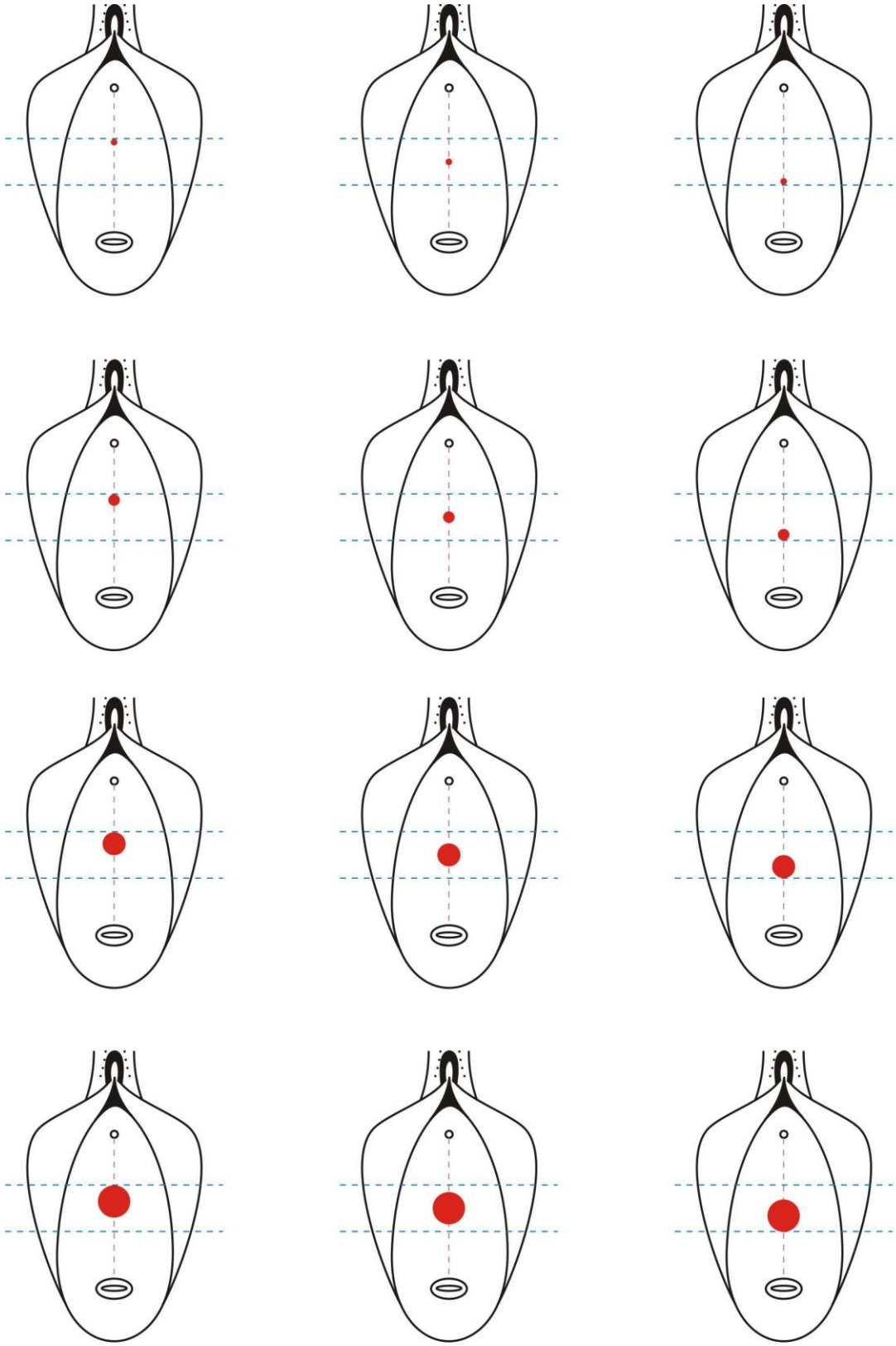
size:	0.2-1.5 cm
location:	midline
distance from euo:	2-4 cm
classification	small type **IIAa**
ruga folds:	intact
mobility:	good mobility of fistula, tissues and cervix
pubic arch	$\geq$ 85°
vagina depth	$\geq$ 10 cm
previous operation	no contraindication as long as no major scarring and no mutilation
rectovaginal fistula	no contraindication
no severe obesity	obesity makes any operation complicated

fig 1 location of fistula



fistula for beginner

fig 2 several possibilities



fistulas for beginner

size
fistulas < 0.2 cm are difficult to handle and need special insight and operation principles
location
fistulas not in the midline are difficult to handle since instrument handling and tissue handling is complicated
distance from euo
any proximal fistula is difficult (instrument handling) and if it is too distal the delicate urethra (main continence structure) may be traumatized
classification
small type **IIAa** fistulas where **II** means involving the urine continence mechanism, **A** no (sub)total urethra involvement and **a** no circumferential defect
ruga folds
when the ruga folds are not intact there is far more trauma than anticipated at first sight and one has to determine exactly the amount of tissue loss
mobility
if mobility is poor then mobilization of tissue and tension-free closure may be compromised or even impossible; even after closure there may be traction upon the repair, such as. when a retracted cervix (after cesarean section) is pulling on the repair when the patient is coughing
pubic arch
if the pubic arch is < 85° then access may be poor which would make the operation more complicated
vagina depth
if the vagina depth is < 10 cm there is already substantial tissue loss
previous operation
if operated by expert surgeon there is almost no scar tissue, however, if operated by a surgeon without expertise there may be excessive scar tissue and mutilation
rectovaginal fistula
a rectovaginal fistula does not interfere with the operation technique or healing; a sphincter ani rupture makes the access even better
however, beginners should not combine the vvf and rvf in one session but concentrate totally on one at a time
severe obesity
severe obesity makes any operation complicated; if so the patient should lose weight first before she can be operated

evidence-based results

out of the 10,529 patients operated during 1983-2010 in the 4 centers katsina, kano, zaria and nguru where there is reliable follow-up, only 1,236 (12%) fulfilled these criteria and were operated by the author and his trainees with the following results:
final healing in 1,230 (99.5%) as 1,221 (98.8%) healed at first attempt and another 9 at second attempt; 3 patients had a ureter fistula as well which was reimplanted successfully at separate attempt and 4 patients did not report for 2nd attempt
out of the 1,230 patients with a healed fistula 1,223 were completely continent whilst only 7 (0.5%) had persistent postrepair incontinence but they did not report for incontinence surgery

training curriculum for doctors

on

(surgical) management of vesicovaginal and rectovaginal fistulas

at

Babbar Ruga National Fistula Teaching Hospital
katsina

and

Laure Fistula Center
Murtala Muhammad Specialist Hopital
kano

kees waaldijk, MD PhD
chief consultant fistula surgeon

first edition december 1996

last edition august 2011

training curriculum for doctors
on
(surgical) management of vesicovaginal and rectovaginal fistulas

interview
- personal introduction
- professional evaluation of the trainee
- purpose of training
- terms of training
- isofs-figo-rcog training manual
- handing out teaching materials
- logbook

introduction
- definitions and terminology
- mechanism of action
- combination vvf/rvf
- medical consequences
- social consequences
- incidence
- prevalence
- public health problem
- history/literature review

anatomy of female pelvis
- bones
- pelvic floor anatomy
- arcus tendineus fasciae
- pubocervical fascia
- arcus tendineus of levator ani muscle
- levator ani muscle
  - pubococcygeus muscle
  - iliococcygeus muscle
  - (ischio)coccygeus muscle
- internal obturator muscle
- piriformis muscle
- sacrotuberal ligaments
- sacrospinous ligaments
- sacrouterine ligaments
- greater sciatic foramen
- lesser sciatic foramen
- blood supply
- innervation

physiology of pelvic floor structures

urine continence mechanism in the female
- whole urethra + bladder neck 4-5 cm
- anatomy of urethra
- crucial role of pubocervical fascia as stabilizing factor

stool continence mechanism in the female

internal sphincter: anorectum 4-5 cm
external sphincter: sphincter ani
perineal body as stabilizing factor

causes of vvf/rvf

obstetric	pressure necrosis + (surgical) trauma during labor
traumatic	surgery or other
chemical	
infectious	
cancer	
radiation	
congenital	

complex trauma of the obstetric fistula

intravaginal lesions due to pressure necrosis
vulva lesions due to pressure necrosis
local extravaginal lesions due to immobilization or neurologic trauma
neurologic lesions due to intrapelvic compression
neurologic lesions due to eclampsia
systemic lesions due to enormous trauma of prolonged obstructed labor
systemic lesions due to blood loss
lesions due to continuous urine leakage
lesions due to restriction of oral fluid intake
sex/condition of infant born

classification

according to location	most important
according to size	additional

consequences of classification

operation technic principles
healing as to closure
healing as to continence

history taking

parity
how many alive
duration of leakage
onset of leakage
home/hospital delivery
sex/condition of infant
menstruation
social status
yankan gishiri
eclampsia

clinical examination

general health status: nutrition, anemia
vaginal examination **without** anesthesia
anal reflex
if negative check for saddle anesthesia
peroneal nerve trauma: grading of drop foot 0-5
accessibility
vagina stenosis
urine dermatitis
bedsores
atonic bladder
peliminary classification
can you handle it or not
if you are not sure, **refer patient to somebody more experienced**

surgical classification with regards to operation technic needed

based on anatomic/physiologic location
type I
type IIAa
type IIAb
type IIBa
type IIBb
type III

laboratory investigation

hemoglobin and serum creatinine, if possible

x-ray investigation

none

examination under anesthesia (eua) as separate procedure

utterly nonsense; only a **money maker** for people who cannot handle vvf

immediate management of fresh obstetric fistulas

catheter
debridement
cleaning
early closure
hematinics
high-protein diet
immediate mobilization

preoperative preparation

high-protein diet
hematinics
personal hygiene
enema
shaving

equipment/instruments/materials

operating table
normal vaginal instruments
special instruments: sharply curved scissors, aneurysm needle
polyglycolic acid
nonabsorbable sutures
needles

anesthesia

spinal anesthesia
long acting, bupivacaine 0.5%
level of spinal tab: normal, low, high
sitting position
head flexed anteriorly/thorax always elevated
major complications
minor complications
blood pressure before/during/after operation

position on operating table

exaggerated lithotomy position
never knee-elbow position

manpower

surgeon
instrumentating theater nurse
no assistant(s): the vagina is a one-man place!
assistants are restricting the surgeon in maneuvering his instruments

route of operation

exclusively the vagina
nb abdominal approach: skin, subcutis, fascia, muscles, fascia, peritoneum, abdomen, peritoneum, bladder and then one is in the vagina; so **why** do not start there immediately?? what a trauma/waste of energy!

accessibility

suturing labia minora to inner thighs
episiotomies if necessary
weighted AUVARD speculum
no retractors: one instrument inside the vagina is already a crowd! and more are hindering the surgeon in maneuvering his instruments

assessment on operating table under anesthesia

pelvis: pubic arch, AP diameter, generalized contraction etc
size of fistula in cm
location of fistula: midline, right, left
distance from external urethra opening to fistula in cm
distance from fistula to cervix/vagina vault in cm
circumferential defect: yes/no
scar tissue, texture, mobility
definite classification
make up your mind what to do exactly
make yourself comfortable/check everything before you start operating

operation technic

check for ureters
incision
sharp minimal dissection/mobilization
bladder/urethra closure: transverse/longitudinal
static bladder capacity
FOLEY catheter and fixation
urethra length
elevation of bladder neck
vagina wall adaptation
episiotomy closure
no routine vagina pack
check urine flow
check blood pressure
detailed operation report

postoperative care

check for vital signs for 4-6 hr
high (oral) fluid intake
regular check of catheter
immediate mobilization
urine output: colorless like clear water
no routine use of antibiotics
antibiotics only on indication: generalized sepsis, pneumonia
hematinics
personal hygiene

surgical aftercare

removal of episiotomy sutures after 7 days
indwelling catheter for at least 2 wk
    if necessary (early closure) 4 wk resp. (atonic bladder) 6 wk
catheter removal in operation theater 2-4-6 wk later
high oral fluid intake and frequent passing of urine
removal of nonabsorbable vagina suture 1 wk after catheter removal
ask for leaking, incontinence and spontaneous miction
check for healing, elevation and stress/urge incontinence
bladder drill for incontinence

postoperative check-ups

regularly up to 6 mth
no sexual intercourse during this period
continue drinking and frequent passing of urine
ask for leaking, incontinence and spontaneous miction
check for healing, elevation and stress/urge incontinence
if in doubt, dye test
the dye no lie

patient counselling

to come back at subsequent pregnancies at 3 mth amenorrhea
to attend antenatal care regularly
fersolate and folic acid
to deliver in hospital by **elective** cesarean section
patient card with written instructions + operation report

documentation

extremely important for monitoring program
history
detailed operation report
check-ups
evaluation reports

prevention

no relation to tribe, religion, culture, early marriage or anything else, except for **early intervention by cesarean section (cs) within 3 hours**
only by establishing a **functioning network** of **125,000 obstetric units throughout Africa** where **emergency cesarean section** can be performed **within 3 hours** of **labor becoming obstructed**
detection of problem patients at **antenatal care** (pelvic assessment); then hospital delivery
identifying problems by **partogram**; then **early referral for cs**

the emphasis is placed on **how to manage vvf/rvf under African conditions**.

having finished this course the candidate must have ample understanding of the complex trauma of the obstetric fistula, the obstetric fistula as a major public health problem, as well as he must be able to decide which fistulas (s)he can handle with confidence and which not

certificate only certificate of attendance will be issued

kees waaldijk, MD PhD august 2011

first edition december 1996

obstetric fistula surgery training

multiple choice questionnaire
for
self-evaluation by trainee

the trainee should fill out this questionnaire at the beginning of the training
and again at the end
so (s)he can evaluate his/her progress him/herself

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chief consultant fistula surgeon

first edition september 1996

last edition august 2011

questionnaire I

any of the answers given might be correct or incorrect
cross the right answer(s)
read it carefully since some questions/answers are tricky

001 a fistula is a(n):
- infection
- malignant disease
- genetic/hereditary disorder
- abnormal connection between two organs
- abnormal connection between an organ and the outside (skin)
- congenital malformation

002 a fistula can be caused by:
- infection
- trauma
- malignant disease
- radiation
- prolonged obstructed labor
- congenital

003 **V**esico**V**aginal **F**istula (= **VVF**) is an:
- abnormal connection between the bladder and the vagina
- abnormal connection between the rectum and the vagina
- abnormal connection between the bladder and the rectum
- abnormal connection between the uterus and the rectum
- abnormal connection between the bladder and the skin
- abnormal connection between the rectum and the skin

004 **R**ecto**V**aginal **F**istula (= **RVF**) is an:
- abnormal connection between the bladder and the vagina
- abnormal connection between the rectum and the vagina
- abnormal connection between the bladder and the rectum
- abnormal connection between the uterus and the rectum
- abnormal connection between the bladder and the skin
- abnormal connection between the rectum and the skin

005 obstetric fistula is a:
- fistula caused by advanced cervix cancer
- fistula caused by advanced bladder cancer
- fistula caused by advanced rectum cancer
- fistula developed during/after labor
- fistula developed during/after total abdominal hysterectomy
- fistula caused by **L**ympho**G**ranuloma **V**enereum (= **LGV**)

006 real cause of the obstetric fistula is:
- early marriage
- early pregnancy
- early delivery
- sociocultural practices
- prolonged obstructed labor
- yankan gishiri

007 mechanism of action of the obstetric fistula is:
- infection
- pressure necrosis
- instrumentation
- yankan gishiri
- radiation

008 the incidence of the obstetric fistula in situations where there is no access to proper antenatal/obstetric care and the mother survives is:
- roughly 5% (5 out of 100) of those deliveries
- roughly 2% (2 out of 100) of those deliveries
- roughly 1% (1 out of 100) of those deliveries
- roughly 5%% (5 out of 1,000) of those deliveries
- roughly 2%% (2 out of 1,000) of those deliveries
- roughly 1%% (1 out of 1,000) of those deliveries

009 there is no obstetric fistula in the industrialized world because:
- the minimum legal age at marriage is 16 or 18 yr
- there is no early sex and so no early pregnancy with early delivery
- there is good antenatal care
- there is proper obstetric care
- there is no obstructed labor
- there is no cephalopelvic disproportion

010 if the bladder is prolapsing through the fistula it is normally:
- the bladder roof falling down due to gravity
- the bladder body prolapsing
- the bladder base prolapsing
- bladder roof/bladder body/bladder base combined

011 fistula with a circumferential defect type **IIAb** means:
- no connection between bladder and pubic symphysis
- no connection between urethra and pubic symphysis
- no connection between bladder and vagina
- no connection between urethra and vagina
- no connection between bladder and urethra
- no connection between bladder and cervix

012 prolonged obstructed labor may also cause the following:
- amenorrhea
- drop foot
- vagina stenosis
- loss of pubococcygeus muscle
- loss of cervix
- urine dermatitis of vulva
- loss of labia majora
- loss of labia minora
- loss of clitoris

013 obstetric fistula amenorrhea is considered to be:
- physiologic during the first 6 months
- borderline from 7 to 12 months
- pathologic after 1 year

014 one year following the occurrence of the obstetric fistula:
- the majority of patients do not menstruate
- the majority of patients do menstruate

015 the incidence of obstetric fistula amenorrhea after one year is:
- $\geq$ 85%
- 75%
- 50%
- 25%
- $\leq$ 15%

016 foot drop is caused by trauma to the **sensory** fibers of the:
- radial nerve
- sciatic nerve
- peroneal nerve
- ulnar nerve
- optic nerve

017 foot drop is caused by trauma to the **motor** fibers of the:
- radial nerve
- sciatic nerve
- peroneal nerve
- ulnar nerve
- optic nerve

018 in foot drop the following is affected:
- plantiflexion of the foot
- inversion of the foot
- dorsiflexion of the foot
- eversion of the foot

019 in fully developed foot drop the foot is in:
- dorsiflexion_eversion
- dorsiflexion_inversion
- plantiflexion_eversion
- plantiflexion_inversion

020 postpartum foot drop is caused by trauma to:
- the intrapelvic plexus due to pressure of the hard fetal skull
- the sciatic nerve at pelvis outlet due to stretching
- the peroneal nerve at the fibula head due to direct pressure
- the peroneal nerve at ankle level

021 the incidence of foot drop in obstetric fistula immediately post partum is:
- over 80%
- 75%
- 60%
- 40%
- 25%
- less than 20%

022 in grading drop foot according to the **M**edical **R**esearch **C**enter (**MRC**) scale:
- 0 = full function/force and .. 5 = no function whatsoever
- 0 = no function whatsoever and .. 5 = full function/force

023 with time the postpartum drop foot will:
- improve in most patients
- deteriorate in most patients
- stay stationary in most patients
- recover completely in all patients

024 urine (ammonia) dermatitis of the vulva:
- is a sign of the fistula
- should be treated before any repair is undertaken
- disappears spontaneously after a successful repair

025 by treating the urine dermatitis before any repair:
- one treats a symptom and delays the real thing
- one treats the cause and does the right thing
- one shows insight in the problems
- one has not got a single clue of the problems

026 postpartum urine leakage is mostly due to:
- severe stress incontinence
- fistula
- atonic bladder
- outflow obstruction

027 true urine incontinence means incontinence due to:
- stress
- overflow
- obstruction
- fistula
- urge

028 bladder capacity is increased in:
- fistula
- stress incontinence
- urge incontinence
- overflow incontinence due to atonic bladder
- overflow incontinence due to outflow obstruction

029 bladder capacity is decreased in:
- fistula
- stress incontinence
- urge incontinence
- overflow incontinence due to atonic bladder
- overflow incontinence due to outflow obstruction

030 if a patient develops postpartum urine leakage:
- she should be sent home and told to come back after 3 months
- then after 3 months a repair should be undertaken
- a FOLEY catheter should be inserted immediately for 4-6 weeks
- a repair should be done immediately
- the necrotic area should be excised immediately
- wait for slough to develop and then excise it
- few days after this debridement a repair should be done
- a repair should be done if the fistula edge is clean

031 if a patient develops an obstetric fistula:
- antibiotics should always be given
- antibiotics should never be given
- antibiotics should only be given on strict (non-fistula) indication, e.g. puerperal sepsis
- high (oral) fluid intake should be started immediately

032 giving antibiotics immediately seems:
- logical because the fistula is caused by infection
- illogical because the fistula is caused by infection
- logical because the fistula is not caused by infection
- illogical because the fistula is not caused by infection
- logical because the fistula is caused by pressure necrosis
- illogical because the fistula is caused by pressure necrosis

033 examination under anesthesia (= **EUA**) as a separate procedure (is):
- a sign that the doctor is highly experienced
- necessary before any repair can be undertaken
- utterly nonsense
- a money-maker for the doctor
- robs the patient of her money
- should be recommended to any doctor dealing with VVF

034 **EUA** should be done always:
- immediately after labor
- 3 months after labor
- at the beginning of any repair
- 3 months after repair
- before permission is given to start sexual intercourse after repair

035 the preferable route for VVF-repair is:
- vaginally
- abdominally
- vaginally and abdominally
- vaginally and abdominally and retroperitoneally

036 in the order stated above in question 35:
- invasion decreases
- invasion increases
- direct access to fistula decreases
- direct access to fistula increases
- operation time decreases
- operation time increases
- chances of postoperative infection decreases
- chances of postoperative infection increases
- operative trauma decreases
- operative trauma increases

037 the preferable route for RVF-repair is:
- vaginally
- abdominally
- vaginally and abdominally
- vaginally and abdominally and retroperitoneally
- colostomy only

038 the preferable anesthesia for VVF/RVF-repair is:
- inhalation anesthesia with endotracheal intubation
- infiltration anesthesia by local anesthetics
- short-acting regional anesthesia: spinal anesthesia by xylocaine
- long-acting regional anesthesia: spinal anesthesia by bupivacaine
- dissociative anesthesia by ketamine

039 the preferable position for VVF/RVF-repair is:
- lithotomy position
- R sided lithotomy position
- L sided lithotomy position
- knee-elbow position
- L sided knee-elbow position
- R sided knee-elbow position
- exaggerated lithotomy position
- R sided exaggerated lithotomy position
- L sided exaggerated lithotomy position
- flat on the operating table

040 the number of "sterile" persons required in vaginal repair are:
- instrumentating operation nurse only
- surgeon only
- surgeon and operation nurse
- surgeon, assistant at R side and operation nurse
- surgeon, assistant at L side and operation nurse
- surgeon, assistant at R side, assistant at L side and operation nurse

041 access to the operation field is obtained by:
- traction by the assistant(s)
- AUVARD speculum
- liberal use of episiotomies
- knee-elbow position

042 normally in VVF-repair the closure is as follows:
- bladder/urethra transversely and anterior vagina wall longitudinally
- bladder/urethra longitudinally and anterior vagina wall transversely
- bladder/urethra and anterior vagina wall **both** transversely
- bladder/urethra and anterior vagina wall **both** longitudinally
- bladder/urethra and anterior vagina wall **both** obliquely

043 yankan gishiri fistula mostly involves:
- bladder base
- bladder neck
- urethra
- bladder roof

044 yankan gishiri is responsible for:
- $\geq$ 40% of all fistulas
- 30%
- 20%
- 15%
- 10%
- $\leq$ 5%

045 yankan gishiri is responsible for:
- ≥ 20% of the obstetric fistulas
- 15%
- 10%
- 5%
- 2%
- ≤ 1%

046 following VVF-repair a FOLEY catheter is inserted because:
- this prevents infection
- this decompresses the bladder
- this allows urine output to be measured
- this is easier for the patient than to urinate herself

047 the FOLEY catheter should stay in for a minimum period of:
- 5 days
- 10 days
- 2 weeks
- 4 weeks
- 6 weeks

048 high (oral) fluid intake is urged since:
- it is nice to drink
- it will speed up healing
- it will prevent ascending infection
- antibiotics will penetrate better into the tissue
- it will prevent blockage of catheter
- it will dilute the urine

049 the minimum amount of (oral) fluids per 24 hours is:
- ≤ 500 ml
- 1,000-1,500 ml
- 2,000-3,000 ml
- 5,000-6,000 ml
- 8,000-9,000 ml
- ≥ 10,000 ml

050 stool pollution of the operation field is dealt with by:
- antibiotics
- meticulous closure of everything
- meticulous closure of bladder/rectum with half-open closure of anterior/ posterior vagina wall
- dilution by large amounts of clean water
- applying disinfectants only
- immediate termination of procedure

051 a longitudinal incision into the anterior vagina wall
- is recommended since all gynecologists use it in elective procedures
- is physiologic
- respects the natural forces in the body
- is surgical malpractice

052 a transverse/semicircular incision into the anterior vagina wall
- is not recommended since gynecologists do not use it
- is physiologic
- respects the natural forces in the body
- is sound surgical practice

053 wide flap-splitting dissection
- necessary; otherwise fistula cannot be closed surgically
- contributes to continence
- unnecessary additional trauma
- is in line with general surgical principles

054 ureter catheterization
- a must in every fistula repair
- only in certain situations
- never
- a must in ureter re-implantation for ureter fistulas type **III**

055 function of ureter catheterization
- promotes dissection
- promotes closure
- promotes healing
- promotes continence
- prevents total ligation of the catheterized ureter
- facilitates identifying iatrogenic intraoperative ureter trauma

056 the real purpose of a suture is
- to promote healing
- to promote continence
- to heal tissue
- to adapt tissue only
- to close a defect meticulously

057 the preferable direction of bladder closure in type **I**
- longitudinal
- transverse
- oblique
- circumferential
- no preference

058 the preferable direction of bladder/urethra closure in type **IIAa**
- longitudinal
- transverse
- oblique
- circumferential
- no preference

059 the preferable dirtection of bladder/urethra cöousre in type **IIAb**
- longitudinal
- transverse
- oblique
- circumferential
- no preference

060 the preferable direction of bladder/urethra closure in type **IIBa**
- longitudinal
- transverse
- oblique
- circumferential
- no preference

061 the preferable direction of bladder/urethra closure in type **IIBb**
- longitudinal
- transverse
- oblique
- circumferential
- no preference

062 the preferable direction of anterior vagina wall closure
- longitudinal
- transverse
- oblique
- circumferential
- no preference

063 closure of the anterior vagina wall
- meticulous closure
- adaptation only
- leaving it completely open

064 grafting by labial fibrofatty pad, pubococcygeus muscle sling etc
- contributes to healing
- contributes to continence
- function doubtful
- non-physiologic procedure with additional trauma

065 critical minimum urethra length for continence
- 0.5 cm
- 1.0 cm
- 1.5 cm
- 2.0 cm
- 2.5 cm
- 3.0 cm
- 3.5 cm
- 4.0 cm

066 pubocervical fascia contributes to urine continence since
- it consists of striated muscle tissue
- stabilizes the cervix in its anatomic position
- stabilizes the anterior urethra in its anatomic position
- stabilizes the anterior bladder in its anatomic position
- stabilizes the posterior urethra in its anatomic position
- it contracts on demand and then compresses the urethra

067 in genuine intrinsic-stress incontinence one finds
- intact pubocervical fascia
- transverse defect in the pubocervical fascia
- median defect in the pubocervical fascia
- lateral defect in the pubocervical fascia
- combined transverse/median/lateral defect in the pubocervical fascia

066 contribution of external sphincter ani muscle to stool continence
- 0%
- 10%
- 50%
- 90%
- 100%

067 contribution of internal sphincter ani (= anorectum) to stool continence
- 0%
- 10%
- 50%
- 90%
- 100%

068 perineal body contributes to stool continence mechanism
- since it consists of connective tissue
- since it contracts and then compresses the anorectum
- stabilizes the vulva in its anatomic position and shape
- stabilizes the anterior anus/anorectum in its anatomic position
- stabilizes the posterior anus/anorectum in its anatomic position

069 repair of fresh sphincter ani rupture
simple so for anybody
needs little experience so for the young resident doctor
needs some experience so for the senior registrar
complicated surgery so only for the expert surgeon
colostomy necessary and as such recommended
just a couple of perineum sutures since perineal tear
concentrate on anorectum
concentrate on sphincter ani muscle
concentrate on perineal body
need for anterior levator ani muscle plasty
need for gracilis muscle graft

070 repair of old (or unsuccessful repair of) sphincter ani rupture
needs some experience so for senior registrar
complicated surgery so only for the expert surgeon
colostomy necssary and as such recommended
need for anterior levator ani muscle plasty
need for gragilis muscle graft

last obstetric fistula surgery
simple so anybody can handle the obstetric fistula
needs some experience so anybody after 2-3 weeks of training
not so simple so doctor needs at least 3 yr of surgical experience
very complicated so for expert surgeons after intensive postgraduate training

questionnaire II

true/false statements
circle the right answer
read it carefully as some of the questions/answers are tricky

the obstetric fistula is caused by pressure necrosis due to prolonged obstructed labor true/false

during obstructed labor the soft tissues (vagina wall and bladder) are being compressed between the hard fetal skull and the hard posterior maternal symphysis true/false

the cause of obstetric fistula is early marriage/pregnancy true/false

the obstetric fistula will disappear if the minimum legal age for marriage of the woman is set at 18 yr true/false

examination under anesthesia as a separate procedure (**EUA**) is utterly nonsense and a money maker for the doctor true/false

lymphogranuloma venereum (**LGV**) is an infection affecting the vulva and can cause VVF true/false

it is possible for small fistulas to heal spontaneously before there is any cross-union between the bladder mucosa and the vagina mucosa true/false

early closure within the first 3 months gives worse results than closure after 3 months true/false

in small fistulas bladder drainage by indwelling FOLEY catheter will heal at least 50% of the patients and is higly recommended true/false

any urine leakage post partum is caused by a fistula true/false

minute fistulas are ideal for surgical trainees to start with true/false

if there is urine (ammonia) dermatitis of the vulva, it should not be treated but a repair performed as soon as possible true/false

fistulas with bladder prolapse are inoperable true/false

colostomy is the solution for RVF true/false

by the time the patient is fixed in the knee-elbow position the operation in the exaggerated lithotomy position is already finished true/false

in fistulas with circumferential defect the knee-elbow or knee-chest position is needed as the whole procedure becomes less complicated true/false

by performing only a colostomy the stool is diverted through to an abnormal opening in the abdomen (and occasionally still through the vagina) which is a tremendous relief to the RVF patient true/false

the grading of drop foot according to the **M**edical **R**esearch **C**enter scale is partially objective by a subjective person true/false

on the **MRC** scale grade 4 means full range of movement but diminished muscle strength true/false

in fully developed postpartum atonic bladder the patient complains of only leaking whilst standing/walking but not whilst lying down true/false

in stress incontinence the bladder capacity is decreased true/false

yankan gishiri is responsible for 12% of all fistulas true/false

yankan gishiri is responsible for 12% of obstetric fistulas true/false

from the patient's point of view and socially the VVF is more embarrassing than the RVF true/false

grafting is better than or equal to reconstruction of functional anatomy true/false

the external sphincter ani is innervated by the pudendal nerve true/false

the internal sphincter ani is innervated by the pudendal nerve true/false

stress incontinence is always associated with intrinsic incontinence true/false

the sling operation is a physiologic solution for postrepair incontinence true/false

the pubococcygeus muscle sling is a physiologic solution for prevention of postrepair incontinence true/false

sexual violence
whilst being in government custody

there is high political interest in sexual violence in war situations as violation of human rights

however, what about sexual violence whilst being in government custody

the report as released by us department of justice is quite shocking

rape in us inmates 2008
report by us department of justice

217,000 inmates were raped whilst inside us jails and prisons during the year 2008; number of incidents not mentioned which is far higher since multiple rape per person
17.000 (12%) of juveniles were raped
4.4% of prison inmates
3.1% of jail inmates

600 persons are raped a day; considering multiple rape actual number far higher
25 persons raped an hour; considering multiple rape actual number far higher

more rapes by staff than by other inmates; though sex between guards and inmates is illegal

law since 2003 but not enforced

question: incidence of sexual violence related injuries in usa

source: the economist 2011, may 7-13, vol 399, no 8732, p 46-47

documentation + fistula research 1984-2011

documentation
the strength of the project is the complete systematic meticulous documentation by over 21,500 individual computerized comprehensive reports of history, findings, operation procedures and evidence-based results of each patient (from the very first to the last in a consecutive way) combined with prospective studies; as well the findings are documented by schematic drawings and some 150,000 full-color slides and full-color digital photos and the different operation techniques by some 80-100 hours of full-color analogous/digital videotapes; from each report we make 2 hard copies

evidence-based results
the patient gets her own card in a plastic map with date and operation report which she presents any time she comes for follow-up; at any postoperative follow-up, normally 5x from 2 wk up to 6 mth but even years later, the findings are written down on the hard copy and later entered into the computerized report which contains up to 250 different parameters
from time to time an analysis is made of the evidence-based results to draw sensible conclusions about the operation techniques and the project as a whole
the documentation is time consuming and takes stamina but without documentation there is no feedback and no proof

research
this is a continuous process, first in a retrospective way but from 1988 onwards, only in a **prospective** way about the obstetric trauma in its broadest sense

only by clinical research we came far and found **scientific, theoretic and practical** solutions for each and every problem encountered

it resulted in a long list; the most important are

PhD degree at University of Utrecht in 1989 about the obstetric fistula

scientific classification of VVF with consequences for operation technique and evi dence-based prospective outcome as to closure and continence

scientific classification of RVF with consequences for operation technique

secondary prevention by the immediate management

prevention of postrepair incontinence by meticulous repair of the pubocervical fascia

logical physiologic approach to genuine and postrepair total urine incontinence where reconstruction of the functional anatomy restores normal physiology: **continence**

physiologic operation technique for sphincter ani rupture

mini-invasive uterus-saving operation for total 3° cervix prolapse

the **philosophy of minimum approach** proved **highly efficient and successful**

:

the already impressive documentation is being updated by adding an electronic sche matic drawing of the fistula to the electronic operation report

the operation report is enclosed with the patient's papers inside a plastic file; so any time she presents herself to any health center; the health personnel can see exactly what has been done and take appropriate action; all the health documents belong to the patient

the **classification of vvf and rvf** is hard to beat since they are based on qualitative and quantitative necrotic tissue loss of pelvis floor structures with evidence-based consequences for the operation technique and results as to closure and continence

the longer we use these **scientific** classifications the more they become of value

the **immediate management** by **catheter and/or early closure** is proven beyond any doubt over 20 years in **4,500 patients . . . . . preventing** them from becoming **outcasts**

how can one **deny** a patient **treatment for 3 full months** by sending her away from the **health** facility; is that the holistic approach as preached by everybody or is it just what it is: **medical malpractice**

the operation techniques have all been perfected as based on the principles of recon structive surgery and evidence-based results; also the principles of septic surgery proved to be of high value

only a **failed system of obstetric care at secondary health level** is responsible for the obstetric fistula as a public health problem

any **grafting** is a **non-physiologic** procedure and as such **inferior** to techniques as based on reconstructive surgery restoring the functional anatomy

once the functional anatomy has been restored, under physiologic stress the normal physiology will be promoted as well

the only function of a suture is to bring and keep tissues together for a sufficiently long time so that nature can execute its physiologic healing processes

the author is privileged to study the experiments of nature about the urine continence mechanism in the female as presented by the obstetric fistula

our findings of anatomic tissue loss, our physiologic operation techniques to step-by-step reconstruct the functional anatomy, our evidence-based results and our theory are in **sharp contrast with the current theory about the urine continence mechanism in the female**

the main continence mechanism is situated within the urethra whilst the potential can shift from the urethrovesical junction towards the external urethra opening as based on physiologic stress; therefore in 3° cervix prolapse normally the woman is continent even with a urethra length of 0.5-1 cm as the distal urethra narrows to pin point size; normally there is no kinking and no masked incontinence

genuine intrinsic/stress incontinence

this theory is based on almost 30 years of clinical research of the **complex obstetric trauma and its (surgical) management**

the evidence comes from meticulous systematic description in writing of the history, anatomic defects, step-by-step operation reports with drawings, long-term follow-up and evalautions of theory and results

any stress incontinence is an expression of a defective intrinsic mechanism (urethra) varying from minimal to total; therefore, intrinsic/stress incontinence

intrinsic/stress incontinence is caused by traction/pull onto the posterior urethra wall into the vagina towards the cervix/vault/sacrum; since the anterior urethra is fixed onto the symphysis the (muscular) arrangement of the urethra is distorted due to this pull, no longer “circular” but more “oval” and so physiologic closure of the urethra is counter-acted

incontinence mechanism
the urethra tries to close whilst traction onto the posterior urethra wall pulls it open
whichever force is the stronger will prevail

this mechanism had been demonstrated and documented in numerous operations involving the continence mechanism where this **posterior pull** was **neutralized** by reconstructive longitudinal and/or transverse repair of the pubocervical fascia and its attachment to the arcus tendineus fasciae paraurethrally; since an intact pubocervical fascia stabilizes/secures the urethra in its anatomic position

there are many underlying causes for traction/pull onto the posterior urethra wall and the art & science is first to define the cause and then reconstruct the functional anatomy in order to neutralize this traction/pull

this mechanism explains why there may be intrinsic/stress incontinence e.g. with longitudinal anterior vagina wall scarring, with fixed cervix and with ureter fistula

so **any trick** without understanding the underlying pathophysiology is **inferior** to physiologic techniques which reconstruct the functional anatomy

besides this, how can **artificial allograftic materials** replace the autologous soft anatomic tissues of the continence mechanism; if it were not for the industry and the money attached; so it is difficult to fight

the **principles** and **physiologic** operation techniques as developed in this project have proven to be **highly effective** in **step-by-step reconstruction** of any defect in the **functional anatomy of the continence mechanism** with step-by-step **intraope rative** prediction/check and **prospective prediction** of also **long-term results**

once the functional anatomy has been reconstructed the
physiology will be promoted/restored
under physiologic stress

Pt 7 **KATSINA** VVF 7

z h m (katsina) female 16 yr 27/03-84

surgeon: Kees WAALDIJK

assistant: Dr RAO

diagnosis: PI, ± 3x2 cm urethrovesicovaginal fistula midline/L type **IIAb**, leaking of urine for 2 yr which started immediately following obstructed labor for 2 days, SB male, married 3 yr ago, not living with husband; pvw stricture EUO/F 4 cm

operation: UVVF-repair and bulbocavernosus fat plasty R

duration: 60 min

anesthesia: spinal L3/L4 with 2 ml lignocaine 5%

incision at 0.2 cm from fistula edge, sharp/blunt dissection of avw, FOLEY Ch 16, tenmsion-free transverse bladder/urethra closure by double layer of inverting chromic catgut, first continuous and second interrupted, check by gv, incision R labium majus, sharp dissection/mobilization of bulbocavernosus fat, tunneling under R lateral vagina wall, fixation of this fat over repair, transverse avw closure, skin closure, pressure pad and vagina pack; free urine flow

15.04 +19.09.84 not leaking at all, no incontinence, normal miction insp/ healed

new second obstetric fistula PII (0 alive) sb female in hospital

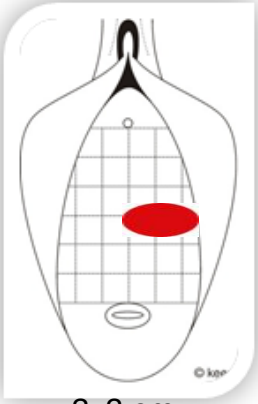
01/07-88 operation: UVVF-repair Pt 853 VVF 960

16/11-88 not leaking at all, no incontinence, normal miction
insp/ healed, no stress incontinence

new third obstetric fistula PIII (1 alive) live female in hospital

02/09-93 operation: cystostomy_stone_VVF-repair Pt 1978 VVF 2418

28/05-94 not leaking at all, no incontinence, normal miction
insp/ healed, good elevation, no stress incontinence



3x2 cm

RR
preanesthesia: 135/85 mm Hg
5": 135/85
10": 130/80
15": 130/80
postoperation: 125/80

Pt 92 **KATSINA** VVF 101

fixation of fibrofatty pad graft onto pubic bones in order to elevate bladder neck

h m d (rép niger) female 17 yr 28/02-85

surgeon: Kees WAALDIJK

assistant: Dr RAO

diagnosis: PI, ± 7x5 cm urethrovesicovaginal fistula type **IIBa**, leaking urine of 3.5 yr which started immediately following obstructed labor for 7 days, dead male, married 7 yr ago, not living with husband, 1x operation 2 yr ago EUO/F 0 cm, F/C 3 cm

operation: UVVF-repair, urethra reconstruction and fibrofatty pad graft R

duration: 120 min

anesthesia: spinal L3/L4 with 2 ml lignocaine 5%

ureters **not** identified, wide U incision at ± 2 mm from fistula edge and 10 mm from urethra roof, difficult sharp/blunt dissection due to scar tissue+, FOLEY Ch 16, tension-free longitudinal urethra reconstruction by double layer and transverse bladder closure by single layer of inverting chromic cat gut, gv check, an incision R labium majus, sharp dissection/mobilization of bulbocavernosus fibrofatty tissue, tunneling under R lateral vagina wall, transverse fixation of the fibrofatty pad over repair taking care that it is spread tightly from R pubic bone periost to L pubic bone periost to elevate bladder neck, transverse avw closure by chromic catgut, skin closure, pressure pad, vagina pack; free urine flow

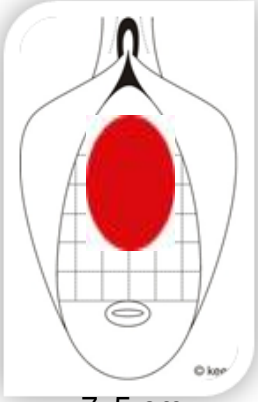
16.03.85 not leaking, no incontinence, normal miction insp/ healed

04.10.85 urine retention 2x foley ch 18

09.12.85 not leaking, incontinence ± insp/ dilatation of UV-stricture

06.01 + 10.06.86 not leaking, no incontinence insp/ healed, neo-euo ok

03/10-89 **amenorrhea for 4 mth** not leaking at all



7x5 cm

RR

preanesthesia: 150/90 mm Hg

5": 150/90

10": 150/90

15": 140/90

postoperation: 135/90

Pt 376 **KATSINA** VVF 411

pubococcygeus muscle plasty

s a k (katsina) female 30 yr 30/06-86

surgeon: Kees WAALDIJK

assistant: Mammani ADAMU

diagnosis: PVII (2 alive), ± 0.5 cm 0 urethrovesicovaginal fistula midline type **IIAa**, leaking urine for 4 mth which started immediately following obstructed last labr for 1 day, SB male, married 15 yr ago, not living with husband, cystocele ++
EUO/F 4 cm, F/C 7 cm

operation: UVVF-repair and elevation by pubococcygeus plasty

duration: 40 min

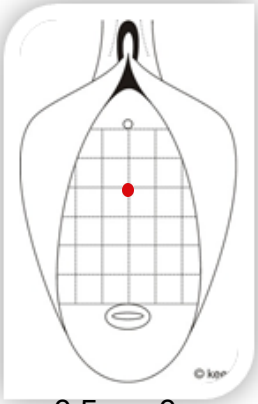
anesthesia: spinal L3/L4 with 4 ml bupivacaine 0.5%

incision at fistula edge with bilateral transverse extensions, sharp/blunt dissection of avw, FOLEY Ch 16, tension-free transverse closure by single layer of inverting chromic catgut 00, gv check, no ff graft but since cystocele ++ elevation by uniting pubococcygeus muscles underneath by chromic catgut 1/5, transverse avw closure by chromic catgut 1/5, vagina pack; free urine flow

15.07 + 28.07 + 11.11.86 not leaking, no incontinence, normal miction insp/ healed

14/01-87 not leaking at all, no incontinence, normal miction
insp/ healed, no stress incontinence, no cystocele

01/08-88 delivered live female **at home** not leaking at all



0.5 cm 0

RR
preanesthesia: 140/90 mm Hg
5": 130/80
10": 130/80
postoperation: 120/70

Pt 492 **KATSINA** VVF 542

obstetric total urine incontinence; pcm plasty

h s b (katsina) female 20 yr 09/02-87

surgeon: kees waaldijk

assistant: dahiru halliru

diagnosis: PI, total urine incontinence grade **III**, leaking urine whilst lying/sitting/stan ding/walking for 2 yr which started immediately following obstructed labor of 2 days, live male, married 4 yr ago, not living with husband, cystocele

operation: plication of paraurethra muscles/bladder neck rhaphy/elevation by pcm

duration: 75 min

anesthesia: spinal L3/L4 with 4 ml bupivacaine 0.5%

transverse curved incision, sharp dissection of avw, sharp dissection of bladder from lateral sides, bilateral longitudinal incision at paraurethra muscles up to symphysis, FOLEY Ch 16, plication of paraurethra muscles over urethra with rhaphy of bladder neck by interrupted chromic catgut 00, preparing 1 cm broad strips from both pubococcygeus muscles, high elevation of bladder neck by suturing these strips over it far anterosuperiorly onto opposite pubic bones and uniting them medially, **no** dye thru euo on cough, transverse avw closure by everting chromic catgut 0/4, vagina pack; free urine flow, no cystocele

03.03 + 17.03.87 not leaking, no incontinence, normal miction insp/ no stress

23/04-87 not leaking at all, no incontinence, normal miction
insp/ healed, good elevation, no stress incontinence, no cystocele

13/07-88 **amenorrhea for 7 mth** not leaking at all

RR
preanesthesia: 120/70 mm Hg
5": 110/70
10": 110/70
postoperation: 110/70

Pt 4019 **KATSINA** VVF 5264

second obstetric fistula

l s m (katsina) female 19 yr 10/10-01

surgeon: Kees WAALDIJK
assistant: Halima MANIR
diagnosis: PIII (1 alive), **large** ± 1 cm 0 urethrovesicovaginal fistula **IIAa** midline fixed to symphysis, leaking urine of 4 mth that started immediately following obstructed last labor for 1 day, **at home** live male, married 6 yr ago pre(menarche 4 mth later), not with husband, no menstruation, drop foot R (grade 4), no RVF, yankan gishiri no; normal AP diameter/pubic arch 85E, N.B. successful VVF-repair (B/R_Id) after delivery II
EUO/F 4 cm, F/C 0 cm 153.0 cm
operation: UVVF-repair
duration: 30 min
anesthesia: spinal L4/L5 with 4 ml bupivacaine 0.5%

episiotomy L, transverse incision thru fistula, sharp dissection, tension-free transverse bladder/symphysis/urethra closure by single layer of inverting serafit, FOLEY Ch 18, transverse avw/cervix adaptation by 3x everting seralon, skin closure, pack; free urine flow, EUO/BW 13 cm, good elevation, EUO/B 4 cm
normal bladder capacity (longitudinal diameter 13-4 = 9 cm)
good position of UV-junction **against** middle third of symphysis

20/11-01 not leaking, incontinence +, normal miction
insp/ healed, good elevation, stress incontinence +

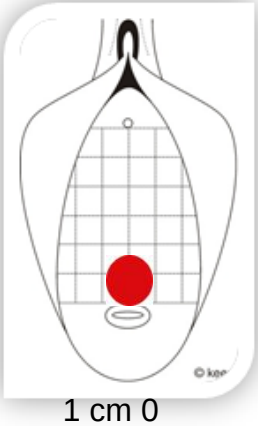
17/04-02 not leaking at all, no incontinence, normal miction
insp/ healed, good elevation, no stress incontinence

new third obstetric fistula PIV (0 alive) after **home delivery of 2 days**
16/05-03 operation: UVVF-repair Pt 4178 VVF 5772

10/12-03 not leaking at all, no incontinence, normal miction
insp/ healed, good elevation, no stress incontinence

new fourth obstateric fistula PV (1 alive) **at home for 2 days** SB male
06/08-04 2 cm 0 necrotic UVVF cath 851

20/10-04 not leaking at, no incontinence, normal miction
insp/healed, good elevation, no stress incontinence



1 cm 0

RR
preanesthesia: 150/80 mm Hg
5": 130/70
10": 120/70
postoperation: 100/70

Pt 5089 KATSINA VVF 6565

urethra_EUO open by pull onto proximal posterior urethra
repair/fixation of ep_pc fascia neutralizes pull

b t d-d (kaduna) female 15 yr 01/10-05

surgeon: kees waaldijk

assistant: kabir lawal

diagnosis: PI, ± 1 cm 0 urethrovesicovaginal fistula **IIAa** midline, **leaking urine for 49 days** that started immediately following obstructed labor of 3 days in hospital, SB male, married 2 yr ago pre(menarche 2 mth later), not living with husband no menstruation, drop foot R (grade 4) and L (grade 5), no RVF, no yan kan gishiri; normal AP diameter/pubic arch 85°, AR pos, sutured 1x
EUO/F 2 cm, F/C 3 cm **open urethra_EUO** 146.0 cm

operation: UVVF-repair

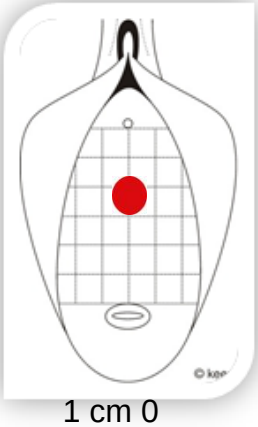
duration: 20 min **(full video recording**) closure 95% continence 90%

anesthesia: spinal L4/L5 with 4 ml bupivacaine 0.5%

episiotomy L, transverse incision thru fistula edge, sharp dissection, tension-free transverse bladder/symphysis/urethra closure by single layer of inverting serafit, sepa rate bilateral paraurethral fixation of ep-pc fascia, triple fixation of FOLEY Ch 18, transverse skin_avw/avw adaptation by 2x everting seralon, skin closure, pack; free urine flow, EUO/BW 14 cm, good anterior elevation, EUO/B 2 cm (**loss**)
normal bladder capacity (longitudinal diameter 14-2 = 12 cm) **urethra_euo adapted**
acceptable position of UV-junction **against** middle/caudad third of symphysis

02/01-06 not leaking at all, no incontinence, normal miction
insp/ healed, good elevation, no stress incontinence

15.10.06 **amenorrhea for 3 mth** not leaking at all



1 cm 0

	RR
preanesthesia:	120/70 mm Hg
5':	120/70
10':	110/70
postoperation:	100/70

Pt 5280 KATSINA VVF 6779

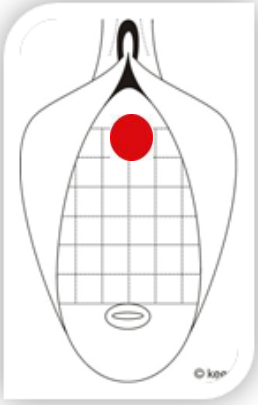
latest development with correction of the anatomic defects _ prospective this will work according to science_art

n m u b (rép niger) female 16 yr 11/06-06

surgeon: kees waaldijk
assistant: kabir lawal
diagnosis: PI (0 alive), post **IIAb** total urine intrinsic_stress incontinence III, leaking urine whilst lying/sitting/standing/walking (no spontaneous miction) for 2 yr which started immediately following obstructed labor for 2 days, in hospital may SB male, married 3 yr ago pre(menarche 2 mth later), not living with husband, normal menstruation, bilateral drop foot for 2 mth R (grade 5) and L (grade 5), no RVF, no yankan gishiri; ?AP diameter?/ pubic arch 85°, AR pos, major pc_ic_ic muscle loss, severe vagina ste nosis/shortening, major defect R fascia, L "ok", operated 2x (zinder)
euo/c 2.5 cm **wide open 1.5 urethra_euo** 156.0 cm
EUO/BW 14 cm, good elevation, EUO/B 1.5 cm (**circum loss**)
operation: urethralization, EUO fixation and paraurethra fixation of ep_pc fascia
duration:#20 min urethra will start functioning final continence 90%
anesthesia: spinal L4/L5 with 3 ml bupivacaine 0.5%

re-episiotomy L, **without any incision** sub-avw rhaphy of fascia_urethra_EUO at 0-2 cm from EUO by single layer of interrupted serafit, bilateral anterior fixation of EUO by serafit, now EUO/B 2.5 cm, **no** urine thru EUO on rest/cough/ pressure, small transverse incision R over fascia defect, paraurethra fixation of „fascia"_avw_cervix by 1x seralon, now EUO/B 3.5 cm, triple fixation of FOLEY Ch 18, pack; free urine flow, EUO/BW 14 cm, good anterior elevation (urethra fixed onto symphysis), EUO/B 3.5 cm (**compression**)
severe scarring **length_diameter_support_position ok**
normal bladder capacity (longitudinal diameter 14-1.5/2.5/3.5 = 12.5/11.5/10.5 cm)
good fixation of UV-junction **against** middle third of symphysis **no** pcm
normal-width 3.5 cm urethra_EUO
in this patient **poor pcm** will not prevent urethra from functioning since other factors have been corrected

17/07-06	not leaking, incontinence +, normal miction insp/ healed, good elevation, stress incontinence +	bladder drill
14/08-06	not leaking, incontinence ±, normal miction insp/ healed, good elevation, no stress incontinence	R=5 L=5 AR pos



	RR
preanesthesia:	130/90 mm Hg
5':	130/80
10':	130/80
postoperation:	120/70

d k d_r (katsina) female 13 yr 09.10.08

surgeon: kees waaldijk
assistant: kabir lawal

diagnosis: P0, **extensive** ± 6x4 cm urethrovesicovaginal fistula type **IIBa** with blad der base prolapse, leaking urine for 3 mth which started immediately following yankan gishiri by wanzami bco not sleeping with husband (she does not like him), native medicine, married 1 yr ago pre(menarche 7 mth later), not living with husband, normal menstruation, drop foot R (grade 5) and L (grade 5), no RVF; normal AP diameter/pubic arch 85°, AR pos
lying/2 more persons/aska/tissue removed (-ectomy)
EUO/F 0 cm, F/C 1.5 cm, i/v 10 cm 157.0 cm

operation: continent urethra/fascia/avw reconstruction

duration: 25 min healing 95% continence 95%

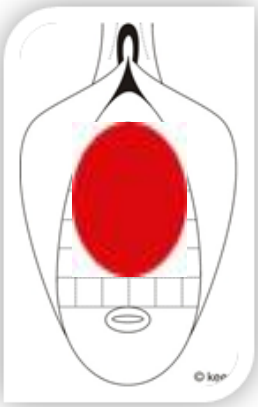
anesthesia: spinal L4/L5 with 3 ml bupivacaine 0.5%

bilateral episiotomy, both ureters identified but only R catheterized for 20 cm, L one minute os which cannot be catheterized (no scarred stenosis that is why it is left), creation of 2.3 cm neourethra thru anterior bladder using metal dilatators, incision around fistula, sharp dissection, tension-free transverse bladder to symphysis/neo urethra closure by single layer of inverting serafit with complete repair of pcf sothat there is proper support for neourethra (but no covering over distal urethra neourethra), triple fixation of FOLEY Ch 18, transverse avw adaptation but again no covering of distal neourethra, check on hemostasis; free urine flow, EUO/BW 12 cm, good anterior elevation, EUO/B 2.3 cm
normal bladder capacity (longitudinal diameter 12-2.3 = 9.5 cm)
good position UV-junction **against** middle third symphysis
normal-width 2.5 cm good-quality bladder neourethra_EUO slightly drawn inside
cave obliteration of neourethra

17.12 + 15.12.08 not leaking, incontinence ±, normal miction insp/ healed, no stress

26.04.09 not leaking at all, no incontinence, normal miction
Insp/ healed, good elevation, no stress incontinence

16.05.11 **amenorrhea for 3 mth** not leaking at all


6x4 cm

	RR
preanesthesia:	120/70 mm Hg
5':	110/70
10':	110/70
postoperation:	110/70

prevention

only by building hospitals, roads and schools
lesson learned from history

in the USA 480,000 teenage deliveries during the year 2002
however, not a single obstetric fistula

there is no relation to

early marriage, height, religion, tribe, race, rural area etc

only to

poor obstetric care

is it not time to change the strategy

after 30 years of failed safe motherhood campaigning

which did not bring a single positive result
due to the arrogance of the aid organizations
spending a fortune
on things which make no sense

at the moment it does not make a difference
where a woman delivers
she is being neglected all the same
at home and in the hospital
dead infant and dead or mutilated mother

does it make sense to mobilize the community to send a patient to a non-functioning hospital

is the community or religious leader coming out of his bed to perform an emergency cesarean section

in laure fistula center 70% of the patients are coming from within kano metropolis; 30% have even delivered in the same hospital

in the southern parts of nigeria many patients deliver in the church and get their fistula inside the church

does it make sense to keep partograms if there is no follow-up due to a non-functioning hospital

will legislation to elevate the age of marriage eliminate the obstetric fistula as people want us to believe

will legislation to elevate age of marriage eliminate early sex/early pregnancy or early childbearing; or does this increase the risk of unsafe abortions

since obstetrics is 100% female from the beginning to the very end
(except a male obstetrician performing a cesarean section)
does it make sense to address the males
is it not better to address the females themselves

more than 90% of the financial resources are spent on
the organization and expensive talkshops

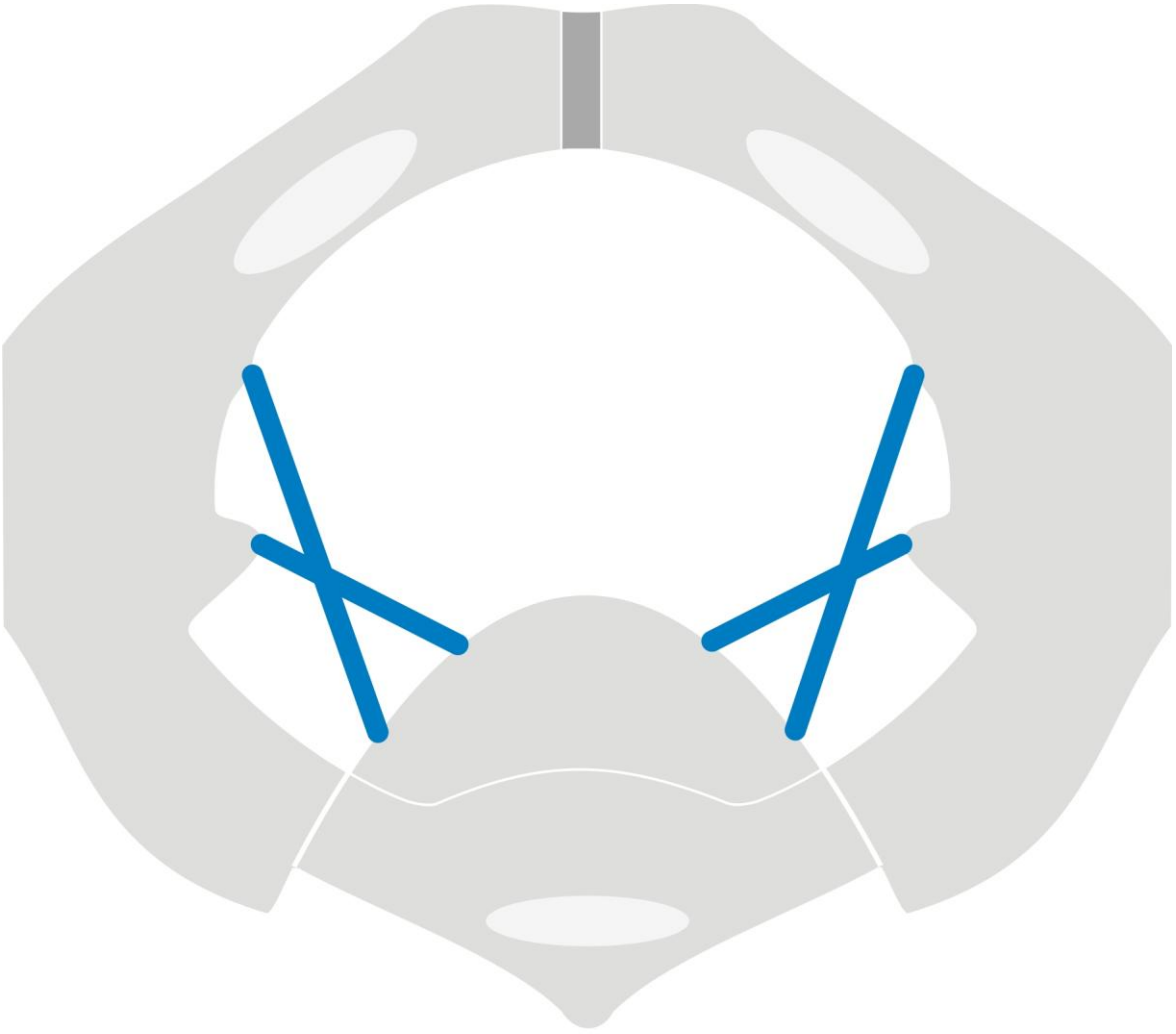
not up to 10% spent on patient care or prevention

however, where is the international strategy

to set up

network of 125,000 functioning obstetric units in africa

improve the hospital obstetric care so that
the highly intelligent public notices the difference
live infant and healthy mother
themselves



sacrotuberal + sacrospinous ligament

there are several general and/or specific objectives: to operate a large number of patients within a short time, to demonstrate the **state of the art** operation techniques, to give high-quality lectures, to tackle a specific problem (stress incontinence, urinary diversion), to promote spinal anesthesia, to initiate doctors with low experience, to further train doctors with experience on an advanced level, to train nurses at all levels, to start a vvf service in a certain area and for advocacy and publicity

duration
from a minimum of 2-3 days to start a vvf service up to 2 weeks if large numbers of patients are available and reliable postoperative care can be secured

minimum number of patients
for a 1-week workshop 25-30 patients and for a 2-week workshop 40-50 patients, otherwise there is no cost-benefit effect

venue
any hospital which can handle the (large) number of patients to be operated within a short time: operation theater, autoclave, pre-/postoperative beds and trained personnel

equipment
if one/two fistula surgeon-trainer: one/two fistula operating table(s) with one/two full set(s) of instruments

pre-workshop screening
the (fistula) doctor of the hospital together with his staff is responsible to collect and screen the patients already far in advance
the logistic officer has to make all the necessary arrangements for accommodation, feeding and transport etc

facilitators
one or two experienced fistula surgeon-trainers, one or two experienced fistula operation theater nurses, one or two experienced spinal anesthesia nurses or doctors and two experienced pre-/postoperative nurses and one logistic officer

trainees
per trainer 3-4-5 doctors together with their operation theater nurse, their anesthetic nurse and their pre-/postoperative nurse
however, if the workshop is meant to start a vvf-service more doctors and especially more nurses and midwives should attend

workshop day-by-day
first day: opening, introduction, questionnaire by trainees for self evaluation and then history taking and examination of the patients, operation time-plan for each day
from second day onwards: wardround, operations with step-by-step demonstration of state of the art techniques, simple operations by the trainees under close supervision, pre-, intra- and postoperative questions and answers, lecture(s) and wardround
last day: ward round, evaluation by all participants, handing out certificates, closure

postworkshop follow-up
the fistula doctor of the hospital and his staff are responsible for the further post-operative care and follow-up of the patients

philosophy
since the emphasis should be placed upon the quality and not the quantity it is better to execute small 4- to 5-day well organized workshops with small numbers of patients than large 10- to 14-day workshops with large numbers of patients where the organization on ground and good postoperative care being the weakest part cannot be ensured

optimal workshop
identify an area where the obstetric fistula is highly prevalent, select an obstetric fistula team, send them for training, this team selects and screens patients and then makes sure the conditions are ok, then invite real fistula surgeon(s) + team
the real expert fistula surgeon(s) + team in combination with the obstetric fistula team on ground screens all the patients for a final selection and sets the objectives
opening ceremony and handing out of a questionnaire for self-evaluation
starts operating whilst demonstrating the step-by-step technique followed by questions& answers about the procedure and theoretical lectures

during the year the chief consultant + team (co)facilitated the following 10 workshops

may 2011 workshop in sokoto and kebbi:		21 procedures
june 2011 training workshop I in katsina:		88 procedures
june/july 2011 training workshop II in kano	:	76 procedures
july 2011 training workshop III in katsina		84 procedures
september 2011 training workshop IV in kano		55 procedures
september 2011 workshop in zinder		16 procedures
october 2011 workshop in maradi		28 procedures
october 2011 training workshop V in katsina		81 procedures
november 2011 workshop in maryam abacha hospital in sokoto:		21 procedures
november 2011 workshop in federal medical center in nguru:		18 procedures
total		**488 procedures**

vvf workshop sokoto/kebbi state

maryam abacha women and children hospital
sokoto

special vvf center
birnin kebbi

monday 23th thru saturday 28th of may 2011

executive summary

we decided to combine this trip to sokoto with a visit to the special vvf center in birnin kebbi both on request by the staff of the centers

these hospitals are very important centers with an enormous potential which has so far been under-utilized though we have been coming and operating and training doctors here since 1994 resp 1997

a total of 21 procedures were performed in 20 patients

when we left there were still many patients left on the long waiting list in these two fistularia; the longer patients stay the more difficult it becomes to rehabilitate them into taking responsibility for their own lives instead of depending upon others

vvf workhosp maryam abacha hospital

sokoto

special vvf center

birnin kebbi

day-to-day report

23rd thru 28th of may 2011

monday 23rd of may 2011
we left katsina at around 11.00 hr and after some 450 km by toyota jeep we arrived safely in sokoto at around 16.30 hr where we checked into the hotel; we had to make several **full stops** to avoid head-on collision with on-coming cars on the wrong side of the road

tuesday 24th of may 2011
we proceeded to maryam abacha women and children hospital in sokoto, the venue of the activities, at around 8.00 hr and started to work

six procedures: compression/ligation of traumatized L uterine artery in **rag ged** type **I** cs fistula in para IV (2 alive), circumferential end-to-end uvvf-repair of type **IIBb** fistula in para I (0 alive), transverse uvvf-repair + pcf fixation of type **IIAa** fistula in para I (0 alive), anorectum/sphincter ani reconstruction of type **IIb** rectovaginal fistula in para I (alive) with catheter treatment bco intrinsic total urine incontinence, catheter treatment of type **IIAa** fistula leaking 24 days
and wardround from **8.00 to 16.30 hr**

wednesday 25th of may 2011

five procedures: continent urethra/fascia/avw reconstruction in severely mutilated type **IIBb** fistula in para I (0 alive) operated 2x (now actually "inoperable"), transverse repair and pcf fixation of strange type **IIAb** fistula in para VIII (4 alive) operated 1x, transverse repair + L ureter of severely mutilated type **IIAa** fistula following tah bco total cervix prolapse in para II (all alive), longitudinal pvw closure + complicated primary suturing of type **I** sth-cs fistula in para IV (3 alive), catheter treatment of type **IIAa** fistula in para III (2 alive) leaking 13 days
and wardround from **8.00 to 16.30 hr**

thursday 26th of may 2011

five procedures: transverse repair + pcf (re)fixation of mutilated type **IIAb** fistula in para IV (w2 alive) leaking 12 yr and operated 1x, continent urethra/ avw reconstruction as salvage operation of severely mutilated type **IIBb** fistula in para I (0 alive) operated 1x, primary suturing as salvage of severely mutila ted ragged type **IIBb** fistula in para I (0 alive) operated 2x, complicated repair of mutilated scarred type **IIAa** fistula in para IX (4 alive) operated 1x, transver se repair + pcf fixation of strange mutilated type **IIAa** fistula in para VII (3 alive)
and wardround from **8.00 to 16.30 hr**

and on the road to birnin kebbi 160 km where we arrived around 18.30 just in time

friday 27th of may 2011
we proceeded to the special vvf center, the venue of the activities, at around 8.00 hr and started to work

five procedures: transverse repair + pcf repair of type **IIAa** fistula in para I (0 alive), longitudinal intracervical vcvf-repair of type **I** fistula in para VI (2 alive) leaking 20 yr, bilateral ureter catheterization + circumferential repair + pcf refixation of type **IIAb** fistula in para II (1 alive), transverse repair of type **IIAa** fistula in para X (7 alive) and transverse repair + pcf fixation of type **IIAa** fistula in para II (1 alive)
and wardround from **8.00 to 16.30 hr**

and on the road back to sokoto 160 km where we arrived 19.30 hr a bit too late

saturday 28th of may 2011
8.00 hr up to the maishai and then traveling same dangerous 450 km back to katsina where we arrived safely at around 15.00 hr mun gode Allah

remarks
we will continue to come to these centers since there are many patients waiting for us and the centers are too important to give up

time spent
a total of **34 hours** on the workshop and **18 hours** on travelling during 6 full days

conclusion
it was a fine workshop where **18 operations** and **3 catheter treatments** were performed in 20 patients
however, have the benefits been worth the risk of traveling on **dangerous** roads, the costs, the efforts and the time spent for the time being we think so

kees waaldijk, MD PhD 30th of may 2011
chief consultant fistula surgeon

many thanks to
the sponsors
waha-international
sokoto state government
all the staff of the maryam abacha hospital and the special vvf center birnin kebbi for their continuing support

obstetric fistula surgery training

Babbar Ruga National Fistula Teaching Hospital
Katsina

first session as pilot

training of 4 consultants and 4 nurses

from monday 30.05 thru saturday 11.06

executive summary

the trainees arrived monday 30.05.11 and were handed a cd-rom with 5 books about the obstetric fistula for self-study

the program was run from tuesday 31.05 thru saturday 11.06 for a full 12 days of 10 hours each from 8.00 thru 18.00 hr starting and ending with a wardround with in between surgery and lectures

on special request by all the trainees spinal anesthesia became part of the training course and all the 8 participants were able to practice

a **total of 4 consultants/doctors** and **4 nurses** followed the intensive **introductory** training course

out of the **total of 88 operations** performed the 4 trainee doctors performed 9 under strict supervision with good result; more was not possible since the difficulty grading increased during the course

a **total of 12 clinical and 15 classroom lectures** were delivered where all the different topics were highlighted with special emphasis on the complex obstetric trauma in its broadest sense including total 3° cervix prolapse

a questionnaire was filled out by all participants for self-evaluation

by the end of the course all the participants had a far better understanding of the complex trauma of the obstetric fistula and its causes and of the urine and stool continence mechanism in the female

however, considering the limited time it can only be considered as an introduction to its (surgical) management; but at least they all know exactly what not to do which is very important

the trainees travelled home on sunday 12.06.11

the whole training was executed according to the guidelines of international global competency-based training manual

first session as pilot

training of 4 consultants and 4 nurses

from monday 30.05 thru saturday 11.06

logbook

sunday 29.05
14.00 to 17.00 discussion with trainers about how to process

monday 30.05
07.00 preparation of facilities
14.00 arrival of tranees, again discussion with trainers, extensive discussions with staff of FMOH
selection of patients for the training workshop
20.00 further discussions with FMOH staff

day 1
tuesday 31.05
06.30 preparation of the hospital
10.00 small opening ceremony, introduction of participants, explaining the training to all participants and tour of the center
12.00 surgery with step-by-step teaching
1 state-of-the-art lecture and demonstration of reconstructive surgery in surgery sphincter ani rupture with preoperative theoretic explanation, explanation and demonstration of spinal anesthesia, **step-by-step** reconstruction of internal sphincter (anorectum), end-to-end reconstruc tion of sphincter ani and repair of perineal body with (in)direct re-union of transversus perinei and posterior re-union of bulbocavernosus muscles in para VI (5 alive)
2 state-of-the-art lecture and demonstration of fixation of cervix onto L superior pubic bone ramus/arcus tendineus fascia/obturator internus muscle against levator ani muscle as mini-invasive uterus-sparing proce dure for total 3° cervix prolapse in para II (all alive)
15.00 four lectures
a sphincter ani rupture; a complex trauma
b total 3° cervix prolapse
c the obstetric fistula in its broadest sense
d questions & answers about procedures and lectures
17.30 wardround of postoperative patients
19.00 end of the working day

day 2
wednesday 01.06.11
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation

day 3
thursday 02.06
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation

day 4
friday 03.06
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation

day 5
saturday 04.06
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation

day 6
sunday 05.06

07.00	preparations for the day
08.00	recap of previous day
09.00	surgery with step-by-step teaching **32 state-of-the-art** lecture and **step-by-step** demonstration of recon structive surgery for sphincter ani rupture already operated 2x **33** repair of type **I** fistula by trainee doctor under direct supervision/assis tance by chief surgeon in para VIII (5 alive) **34** repair and fascia repair/bilateral fixation of residual type **IIAb** lungu fistula in para I (0 alive) **35** urethralization by bilateral fascia fixation in total post **IIAb** intrinsic_ stress incontinence grade III in para I (0 alive) **36** assessment of type **I** cs-vcvf in para VIII (4 alive) with severe obesity and fistula high up in vagina; first to slim down **37** bilateral fascia fixation in total post **IIAa** intrinsic_stress incontinence in para I (0 alive) **38** repair + bilateral fascia fixation in large type **IIAa** fistula in para VI (2 alive) **39** uvvf-repair + transverse fascia repair of type **IIAa** fistula in para VII (0 alive) leaking 17 yr since delivery I and operated 1x elsewhere
16.30	no lectures since it is sunday
16.30	wardround
16.30	closure by participants selection of patients for next day
18.00	closure of the day

day 7
monday 06.06
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation

day 8
tuesday 07.06
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation

day 9
wednesday 08.06
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation

day 10
thursday 09.06
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation

day 11
friday 10.06
preparations, recap, surgery, lectures, q&a, wardround, prepartions, documentation

day 12
saturday 11.06

07.00	preparations for the day
08.00	recap by ms binta garba
08.30	wardround
09.00	surgery
	83 state-of the-art demonstration of advancement/circumferential fixation of bladder into euo in **extensive** type **IIBb** fistula as first stage in ba hanya in para I (0 alive)
	84 bilateral fixation of pc fascia onto para-euo atf as **last resort final** procedure in post **IIAb** total instrinsic_stress incontinence after vvf/rvf-repair in para II (0 alive)
	85 uvvf-repair + euo-rhaphy in type **IIAa** fistula in para VI (1 alive) after operation elsewhere
	86 vvf-repair of type **I** fistula caused by caustics for reasons unknown in para XI (4 alive)
13.00	evaluation of the training programme by trainees and trainers
	small closing ceremony
	handing out certificates to participants
	farewell wishes
15.30	participants left hospital
17.00	wardround
18.00	selection of patients
19.00	end of working day

day 13
sunday 12.06

	participants travelled home and routine returned
09.00	surgery
	87 ps-like 4/5 circumferential uvvf-repair as **minimum surgery** of **new second** obstetric **extensive** type **IIBb** fistula in para VII (1 alive) who had a successful repair post delivery III (0 alive)
	88 complicated ps-like uvvf-repair as **last resort final** of **extensive** type **IIAb** fistula in para I (0 alive) operated 3x elsewhere and leaking for 25 yr with extensive anteriobilateral trauma and long-standing non-drink ing
14.00	chief sugeon travelled to kano for surgery and for organizing the second session starting monday 27th of June 2011
17.15	arrival at hotel and end of working day

kees waaldijk MD PhD 21st of June 2011
chief consultant surgeon

participants

dr idris ahmad	chief medical officer	fmc	keffi
mrs rosemary obiorah	acno	fmc	keffi
dr sadiya nasir	consultant obs&gyn	uduth	sokoto
mrs lami s a osori	acno	uduth	sokoto
dr nasir garba abdullahi	consultant obs&gyn	fmc	azare
ms binta adamu garba	sno	fmc	azare
dr sunday eneme adaji	consultant obs&gyn	abuth	zaria
mrs lami s okoye	acno	abuth	zaria

trainers

dr said ahmad	consultant obs&gyn	jahun vvf center
dr idris a halliru	moh	katsina

facilitators pre-, intra- and post-operative care

dr abdulmajid mudasiru	cmd	babbar ruga hospital
alh abdullahi haruna	cno	
alh kabir k lawal	cno	
alh gambo lawal	cno	
hajiya adetutu ajagun	cno	
hajiya amina mamman	cno	

chief trainer

dr kees waaldijk	chief consultant surgeon	babbar ruga hospital

obstetric fistula surgery training

second session

Laure Fistula Center
Murtala Muhammad Specialist Hospital
Kano

training of 4 consultants and 5 nurses

from monday 27.06 thru sunday 10.07.11

executive summary

the trainees arrived monday 27.06.11 and were handed a cd-rom with 5 books about the obstetric fistula, the isofs-figo-rcog training manual, a logbook and questionnaire for active participation, self-study and self-evaluation

however, none of the doctors was a consultant which made the training even more difficult since the basics in theory and practice are not present though they had a variable experience in obstetrics/gynecology

all the participants insisted that we should stick to the normal working hours and some complained about working on saturday and sunday

since nobody was willing to volunteer for the recaps we skipped it; it shows the level of commitment; this is not a kindergarten

the program was run from monday 27.06 thru saturday 09.07 for a full 13 days of 8 hours each from 8.00 thru 16.00 hr starting and ending with a wardround with in between surgery and lectures

on special request by all the trainees spinal anesthesia became part of the training course and all the 9 participants were able to practice

a total of 76 operations were performed; however, considering the difficulty grading there was only one small type IIAa fistula which was operated by a trainee doctor under strict supervision with good result; the rest was from complicated to very complicated

this is due to the fact that many patients turned up who had been operated several times by different surgeons in different centers; resulting in **last resort final proce dures 9x** and assessment of **inoperable fistulas 6x**

a questionnaire was filled out by all participants for self-evaluation

a total of 10 clinical and 8 classroom lectures were delivered where all the different topics were highlighted with special emphasis on the complex obstetric trauma in its broadest sense including total 3° cervix prolapse

by the end of the course all the participants had a far better understanding of the complex trauma of the obstetric fistula and its causes and of the urine and stool continence mechanism in the female

however, considering the limited time it can only be considered as an introduction to its (surgical) management; but at least they all know exactly what not to do which is very important

their conclusion was to refer the obstetric fistula patients to a center where the neces sary expertise is available since the surgery was too difficult for them

the whole training was executed according to the guidelines of isofs-figo-rcog competency-based training manual

all the trainees were supposed to keep meticulous documentation of what they saw, did and learned in their logbook

the trainees travelled home on saturday 09.07.11

second session

training of 4 consultants and 5 nurses

from monday 27.06 thru sunday 10.07.11

logbook

day 0
sunday 26.06
katsina

07.00	catheter treatment 6x + surgery 3 operations + administration
14.00	traveling of chief surgeon by road to kano
17.15	arrival at hotel
17.30	supposed arrival of participants but only 2 turned up

day 1
monday 27.06

07.00	preparation of facilities
09.00	introduction of participants, explaining the training to all participants, explaining the logistics/financial implications by representative of FMOH
10.00	surgery **89+90 complicated** bilateral ureter catheterization + uvvf-repair + bilateral pcf fixation of type **IIAa** fistula and rvf-repair of type **Ia** fistula in one patient para III (0 alive) **91** continent euo rhaphy/urethra/pcf/avw reconstruction as **last resort** in para I (0 alive) following urethra/rvf-repair after yankan gishiri fistulas and then uvvf-repair of **obstetric** type **IIBa** fistula **92** uvvf-repair of type **IIAa** fistula in para I (0 alive)
13.00	selection of patients for the training workshop
14.30	postoperative wardround
15.00	end of the working day

day 2
tuesday 28.06
preparations, wardround, surgery, lectures, wardround, selection, documentation

07.00	preparations for the day
08.00	wardround
08.30	surgery with step-by-step teaching **93 state-of-the-art** lecture and demonstration of reconstructive surgery in **mutilated** sphincter ani rupture **IIb** with preoperative theoretic teaching of the stool continence mechanism, explanation and demonstration of spinal anesthesia, **step-by-step** reconstruction of internal sphincter (anorectum), end-to-end sphincter ani reconstruction ani and repair of perineal body with (in)direct re-union of transversus perinei and bulbocavernosus muscles in para I (1 alive) already operated 2x, now 58 days post partum

94 repair of minute tah-cs type **I** fistula by **early closure minimum surgery** in para XII (8 alive)
95 repair of **extensive** type **IIBa** fistula as result of **infection (boil)** at 3 yr of age, leaking for 33 years, as **first stage minimum surgery** in para VI (1 alive)
96 continent urethra/fascia/avw reconstruction of type **IIBb** operated 2x in para I (0 alive) with severe scarring, poor-quality tissue and total cervix fixation pulling on repair
97 complicated 4/5 circumferential uvvf-repair of type **IIAb** fistula in para I (0 alive)
98 vvf-repair of type **I** fistula as **early closure** in para IX (3 alive) due to anterior trauma
99 repair of type **I** fistula in para IV (1 alive)
lecture
a. stool continence mechanism, pathophysiology and development of sphincter ani rupture as **cut-thru** trauma and systematic reconstruction of the functional anatomy in this complex trauma

14.00 selection of patients
15.30 wardround of postoperative patients
16.15 end of the working day

day 3
wednesday 29.06
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 4
thursday 30.06
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 5
friday 01.07
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 6
saturday 02.07
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 7
sunday 03.07
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 8
monday 04.07
07.00 preparations for the day
08.00 wardround
08.30 surgery with step-by-step teaching
133 state-of-the-art continent urethralization/fascia/avw reconstruction for **third consecutive** obstetric **leakage** now post **IIBb** delivery total urine intrinsic-stress incontinence in para III (1 alive) as **last resort**; had successful uvvf/rvf-repair for extensive obstetric trauma during delivery I
134 step-by-step teaching of 4/5 circumferential vesicourethrostomy with transverse fascia repair/bilateral refixation onto paraurethra_euo atf of type **IIAb** fistula in para I (0 alive) not healed by catheter treatment

135 state-of-the-art circumferential dissection and circumferential bladder fixation into “euo” as **first stage** in reconstruction of extensive type **IIBb** fistula whereby bladder neck slipped upwards and got fixed to cephalad brim of symphysis in para I (0 alive) as part of **immediate** management; if necessary for continent urethra/fascia reconstruction as **second stage**

136 repair of type **IIBa** fistula as first stage in para I (0 alive) operated 1x elsewhere

137 catheter treatment of total postpartum urine intrinsic-stress inconti nence grade III in para I (0 alive) leaking for 17 days

138 catheter treatment of total postpartum urine intrinsic-stress inconti nence grade III in para I (alive) leaking for 8 days

13.30 selection of patients

14.00 lectures

a the complex trauma of the obstetric fistula

b pelvis anatomy and pelvis floor anatomy

c the pressure gradient of obstructed labor in relation to pelvis floor structures

15.00 postoperative wardround

15.30 end of the working day

day 9
tuesday 05.07
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 10
wednesday 06.07
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 11
thursday 07.07
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 12
friday 08.07
preparations, wardround, surgery, lectures, wardround, selection, documentation

12.00 end of the working day so that everybody can prepare for the mosque

day 13
saturday 09.07

7.00 preparations for the day

8.00 wardround

08.30 surgery with step-by-step teaching

160 demonstration of longitudinal repair of 4x1.5 cm pc fascia defect with bilateral refixation onto paraurethra-euo atf + excision of mutilated avw in post **IIAb** total urine intrinsic-stress incontinence grade III in para I (0 alive)

161 final assessment under spinal anesthesia of **inoperable** type **IIBb** fis tula after successful rvf-repair in para I (0 alive) due to **severe scarring/ everything fixed**

162 disobliteration of neourethra with uvvf-repair of **second** obstetric type **IIBb** fistula in para IV (0 alive)) who delivered at home after a 3-stage repair of extensive fistula post delivery III

163 repair of type **IIa** rvf as **first stage** in para I((0 alive) with also **extensive** type **IIBb** fistula operated 1x elsewhere and leaking/passing stools pv for 16 yr

164 uvvf-repair of **second** obstetric type **IIAb** fistula in para III (0 alive) who delivered at home ("miscarriage" of sb male) after successful repair post delivery I

12.00 evaluation of the training programme by trainees and trainers
small closing ceremony
handing out certificates to participants
farewell wishes

13.00 postoperative wardround

13.30 chief surgeon travelled by road to katsina

15.00 administrative work

19.00 end of the working day

kees waaldijk MD PhD 10th of July 2011
chief consultant surgeon

participants

dr charles onyra	pmo	gen hosp	gwarzo
alh yusuf abdullahi dannafada	po nurse	gen hosp	gwarzo
hajiya binta waziri kin	acno	gen hosp	gwarzo
dr aminu a gumel	smo	fmc	b/kudu
hajiya mariya garba Hassan	cno	fmc	b/kudu
dr adamu tella garba	pmo	gen hosp	gezawa
alh nadabi mohammed shitu	cno	gen hosp	gezawa
hajiya dije adamu gaya	cno	gen hosp	gezawa
dr gabari habib dauda	pmo	mmsh	kano

trainers

dr idris suleiman abubakar	consultant obs&gyn	akth	kano
dr amir iman yola	pmo	mmsh	kano

facilitators pre-, intra- and post-operative care

alh abdullahi haruna	cno	babbar ruga hospital
hajiya binta musa	cno	mmsh
hajiya asma'u mado	cno	mmsh
hajiya mairo ahmed	cno	mmsh
hajiya zainab mohammed	cno	mmsh
hajiya usaina suleiman	no	mmsh

chief trainer

dr kees waaldijk	chief consultant surgeon	babbar ruga hospital

obstetric fistula surgery training

third session

Babbar Ruga National Fistula Teaching Hospital
Katsina

training of 4 doctors and 8 nurses

from monday 11.07 thru sunday 14.07.11

executive summary

the original pre-exercise agreements for trainees' criteria were:

young consultants with their pre-, intra- and post-operative nurse(s) from federal medi cal institutions/centers from all over the federation

however, that has watered down against all **professionalism** of obstetric fistula (surgical) management

now we ended up with young surgically inexperienced doctors from general hospitals in local government areas

as well, the agreement was 4 doctors and 4 nurses at a time since only 2 operating tables available

now we ended up with **4 doctors and 8 nurses** which is not a problem since we can handle any amount of nurses in the pre-, intra- and post-operative care

the **good news** is that they are all highly interested, very cooperative and really doing their best to pick up

the lesson they learned was: **immediate** bladder catheterization the moment the leaking of urine becomes manifest

the trainees arrived monday 11.07.11 and were handed a cd-rom with 5 books about the obstetric fistula, the isofs-figo-rcog training manual, a logbook and questionnaire for active participation, self-study and self-evaluation

however, none of the doctors was a consultant which made the training even more difficult since the basics in theory and practice are not present though they had a variable experience in obstetrics/gynecology

the recaps we re-introduced

the program was run from monday 11.07 thru friday 22.07 for a full 12 days of 10 hours each from 8.00 thru 18.00 hr starting and ending with a wardround with in between surgery and lectures

on special request by all the trainees spinal anesthesia became part of the training course and all the 12 participants were able to practice

a total of 84 operations were performed; however, considering the difficulty grading there were only 2 small type IIAa fistulas which were operated by a trainee doctor under strict supervision with good result; the rest was from complicated to very complicated

a total of 10 clinical and 12 classroom lectures were delivered where all the different topics were highlighted with special emphasis on the complex obstetric trauma in its broadest sense including total 3° cervix prolapse

a questionnaire was filled out by all participants for self-evaluation

by the end of the course all the participants had a far better understanding of the complex trauma of the obstetric fistula and its causes and of the urine and stool continence mechanism in the female

however, considering the limited time it can only be considered as an introduction to its (surgical) management; but at least they all know exactly what not to do which is very important

the whole training was executed according to the guidelines of isofs-figo-rcog competency-based training manual

all the trainees were supposed to keep meticulous documentation of what they saw, did and learned in their logbook

the trainees travelled home on friday 22.07.11

third session

training of 4 doctors and 8 nurses

from monday 11.07 thru sunday 14.07.11

logbook

day 0
sunday 10.07

07.00 preparations for the day + catheter treatment for fistula as **immediate management**

07.30 **165** catheter treatment of **necrotic** type **IIAa** fistula of 21-day duration in para VI (2 alive)
166 catheter treatment of 3x1 cm **necrotic** type **IIAb** fistula of 14-day duration in para I (0 alive) with total circumferential trauma and also type **Ia** rectovaginal fistula with total episiotomy L breakdown

08.00 wardround

08.30 surgery
167 state-of-the-art circumferential fixation of bladder into euo with bi lateral pcf refixation as **minimum surgery first stage** in **extensive** type **IIBb** fistula of **39-day duration** in para I (0 alive) with total circumfer ential trauma; if necessary for continent urethra as second stage
168 primary suturing as **last resort final** of **mutilated extensive** 4 cm 0 type **IIBb** fistula in para IV (0 alive) leaking for 30 yr which started post delivery I and operated at least 10x by 7 different surgeons
169 complicated uvvf/tah-cs-vvf repair of **strange multiple mutilated** type **IIAa** fistulas with urge incontinence in para II (0 alive) operated 1x and also type **Ic** stool fistula fixed onto midline sacrum
170 circumferential repair with fixation of pc fascia/bladder peritoneum as **first stage minimum** of **extensive** type **IIBb** fistula in para I (0 alive) not healed by **immediate** catheter treatment 1348 at 15-day duration

16.00 selection of patients for next day
171 catheter treatment of **necrotic** type **IIAa** fistula with **atonic bladder** in 43-yr-old para XI (7 alive) at 17-day duration following sb male by cs

18.00 postoperative wardround

18.30 end of the working day
supposed arrival of participants but none turned up

day 1
monday 11.07
preparation of facilities, wardround, surgery, wardround, selection, documentation

day 2
tuesday 12.07
preparation of facilities, wardround, surgery, wardround, selection, documentation

day 3
wednesday 13.07
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation

day 4
thursday 14.07
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation

day 5
friday 15.07

07.00	preparations for the day
08.00	wardround
08.30	surgery with step-by-step teaching **192 clinical lecture** and uvvf-repair as **early closure** with fascia repair of small type **IIAa** fistula with **b characteristics** within **large obstetric circumferential trauma** in para I (0 alive); leaking 45 days **193** disbliteration of neourethra + uvvf-repair as **last resort** in **second obstetric** type **IIBb** fistula in para II (0 alive) after in total 6 operations **194** uvvf-repair + transverse fascia repair/fixation as **early closure** of type **IIAa** in para VIII (3 alive) **195** circumferential dissection and circumferential repair with fascia refix ation as **early closure** of type **IIAb** fistula in para I (0 alive) 31 days pp
12.30	break and preparations for the mosque
15.00	lectures postponed since no projector available
15.30	postoperative wardround
16.00	selection of patients
17.00	administration
18.00	end of the working day

day 6
saturday 16.07
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation

day 7
sunday 17.07
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation

day 8
monday 18.07
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation

day 9
tuesday 19.07
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation

day 10
wednesday 20.07
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation

day 11
thursday 21.07
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation

day 12
friday 22.07

07.00 preparations for the day
08.00 recap of day 11
08.30 wardrouind
09.00 surgery with step-by-step teaching
240 additional fixation of cervix at R as **second stage according to master plan** since 2° cervix prolapse at R following successful fixation at L as **first stage** for total cervix prolapse in 16-yr-old para I (alive) as uterus-saving mini-invasive procedure
241 additional fixation of R cervix as **second stage** after successful fixa tion at L as **first stage** of total cervix prolapse in para VI (4 alive) who had 3 live children with total prolapse for 12 yr

nb all the patients in the hospital were attended to and there are no more patients left on the waiting list
11.30 handing out certificates to all participants
votes of thanks from both trainers and trainees
official closure of the training workshop
12.00 postoperative wardround
12.30 end of the working day so that everybody can prepare for the mosque
16.00 travelling of the surgical team by road from babbar ruga to kofan gayan hospital in zaria since they have over 10 patients on the waiting list and we have to continue with our work
18.15 safe arrival of the team in the hotel

saturday 23.07

08.00 preparations for the day
08.30 surgery
242 circumferential dissection, advancement, circumferential end-to-end ve sicourethrostomy + bilateral pcf refixation as **early closure** of large type **IIAb** fistula in para I (0 alive) at 52 days
243 complicated repair of **ragged iatrogenic** longitudinal type **IIAa** fistula in para X (4 alive) who deliverd sb female vaginally and then had lapa rotomy/hysterectomy same day for reasons not given
244 repair of minute < 0.1 (1.5 after dissection) cm type **I** sth-cs-vcvf fistula in para XI (7 alive) who was leaking little with spontaneous miction

245 transverse pc fascia repair/bilateral refixation with in the process closure of small type **IIAa** fistula with **b characteristics** in para VII (2 alive); who cares about obstetric care

15.30 postoperative wardround

16.00 end of the working day

sunday 24.07

08.00 wardround

09.00 surgery

246 uvvf-repair + transverse pcf fixation as **early closure** of type **IIAa** fistula in para I (0 alive) leaking for 60 days

247 catheter treatment of 4 cm 0 **necrotic** type **IIA** in para I (0 alive) lea king 10 days

248 catheter treatment of type **IIAa** fistula in para II (1 alive) leaking for 40 days (still chance of healing) who cannot stand/walk without support

not a single patient left on the waiting list

11.30 postoperative wardround

12.00 traveling of chief surgeon to kano as normal rhythm

14.15 arrival in hotel and end of the working day

kees waaldijk MD PhD 22th of July 2011

chief consultant surgeon

participants

dr bawa dogara bure		atbuth	bauchi
mrs alang b larau			
dr ahmed saheed bolaji		gen hosp	daura
alh aliyu husaini maibara			
hajia aisha namadi			
dr sani dandela		gen hosp	funtua
hajia murja salihu sagir			
hajia anas abdulkadir			
dr hayatu tanimu		gen hosp	kankara
alh bello gambo			
mrs osuagwu eunice chinyere			
hajiya aishatu ahmed	cno	hgsgh	zaria

trainers

dr said ahmad	consultant obs&gyn	vvf center	jahun
dr idris a halliru	moh	katsina	

facilitators pre-, intra- and post-operative care

dr abdulmajid mudasiru	cmd	babbar ruga hospital
alh abdullahi haruna	cno	
alh kabir k lawal	cno	
alh gambo lawal	cno	
hajiya adetutu ajagun	cno	
hajiya amina mamman	cno	

chief trainer

dr kees waaldijk	chief consultant surgeon	babbar ruga hospital

trainers

dr idris suleiman abubakar	consultant obs&gyn	akth	kano
dr amir iman yola	pmo	mmsh	kano

facilitators pre-, intra- and post-operative care

alh abdullahi haruna	cno	babbar ruga hospital
hajiya binta musa	cno	mmsh
hajiya asma'u mado	cno	mmsh
hajiya mairo ahmed	cno	mmsh
hajiya zainab mohammed	cno	mmsh
hajiya usaina suleiman	no	mmsh

chief trainer

dr kees waaldijk	chief consultant surgeon	babbar ruga hospital

obstetric fistula surgery training

Laure Fistula Center
Murtala Muhammad Specialist Hospital
Kano

fourth session

training of 6 consultants/doctors and 4 nurses

from monday 12.09 thru friday 23.09.11

executive summary

the trainees arrived monday 12.09.11 and were handed a cd-rom with 5 books about the obstetric fistula, the isofs-figo-rcog training manual, a logbook and questionnaire for active participation, self-study and self-evaluation

the program was run from monday 12.09 thru friday 23.09 for a full 12 days of 8 hours each from 8.00 thru 16.00 hr starting and ending with a wardround with in between surgery and lectures

on special request by all the trainees spinal anesthesia became part of the training course and all the participants were able to practice

a total of 55 operations were performed; however, considering the difficulty grading there was none suitable for repair by the trainees

this is due to the fact that many patients turned up who had been operated several times by different surgeons in different centers

one of the operating lights broke down and since we could not get repair/replacement in time we had to continue on one operating table

a questionnaire was filled out by all participants for self-evaluation

since we had problems with the projector no classroom lecture could be delivered

still **a total of 9 clinical lectures** were delivered where all the different topics were highlighted with special emphasis on the complex obstetric trauma in its broadest sense including total 3° cervix prolapse

by the end of the course all the participants had a far better understanding of the complex trauma of the obstetric fistula and its causes and of the urine and stool continence mechanism in the female

however, considering the limited time it can only be considered as an introduction to its (surgical) management; but at least they all know exactly what not to do which is very important

the whole training was executed according to the guidelines of **global competency-based training manual**

all the trainees were supposed to keep meticulous documentation of what they saw, did and learned in their logbook

the trainees travelled home on friday 25.09.11

a start was made with **pessary treatment for “incurable” postrepair incontinence** since urinary diversion is not an option

fourth session

training of 6 consultants/doctors and 4 nurses

from monday 12.09 thru friday 23.09.11

logbook

day 1
monday 12.09

07.00	preparation of facilities
08.00	introduction of participants and outlining the course
09.00	surgery **249** clinical lecture and catheter treatment of overflow/intrinsic/stress incontinence grade III in para III (all alive) leaking for 12 days **250** catheter treatment of total overflow/intrinsic/stress incontinence grade III in para I (0 alive) leaking for 15 days **251** catheter treatment for total intrinsic/stress incontinence grade III in para I (0 alive) leaking for 8 days follow-up consultation in 9 patients
10.00	introduction of participants, explaining the training to all participants, explaining the logistics/financial implications by representative of FMOH
10.30	surgery with step-by-step teaching **252** urethralization + bladder closure for post **IIAa** intrinsic/stress incontinence grade III in para I (0 alive): fistula had healed by immediate catheter treatment for 4 wk **253** urethralization for genuine postpartum intrinsic/stress incontinence grade II-III in para V (3 alive) not responding to bladder drill **254** uvvf-repair + transverse fascia repair as **early closure** for medium-size type **IIAa** fistula in para V (3 alive) leaking 42 days **255** uvvf-repair + transverse fascia repair as **early closure** for small type **IIAa** fistula in para XIV (9 alive) leaking 30 days
14.00	selection of patients for the training workshop
15.00	wardround of postoperative patients
15.30	end of the working day
17-18.00	administration and documentation

day 2
tuesday 13.09
preparations for the day, wardround, surgery, selection of patients, wardround and documentation

day 3
wednesday 14.09
preparations for the day, wardround, surgery, selection of patients, wardround and documentation

day 4
thursday 15.09
preparations for the day, wardround, surgery, selection of patients, wardround and documentation

day 5
friday 16.09

07.00	preparations for the day
08.00	wardround
08.30	surgery with step-by-step teaching **276** transverse repair of **mutilated** lungu-lungu type **IIAa** tah-cs fistulas at fixed vault in para II (0 alive) leaking 11 yr and operated 4x elsewhere **277** highly **complicated** repair of intracervical type **I** cs-fistula with fixed cervix as **early closure** in para III (1 alive) leaking 38 days
11.00	postoperative wardround
11.30	chief surgeon travelled to zaria since kano state on strike and no opera tions on saturday and sunday
14.00	arrival in hotel; end of working day

day 6
saturday 17.09
zaria

08.00	selection of patients + preparations for the day
08.30	surgery **278** catheter treatment for overflow incontinence due to atonic bladder in para I (alive) leaking urine for 3 days **279** transverse closure of type **I** sth-cs vesicocervicouterovaginal fistula in para X (8 alive) with total anterior uterus wall loss so that posterior uterus becomes posterior bladder **280** excision of mutilation-scar tissue + urethralization + euo-rhaphy for total post IIBa repair total intrinsic_stress incontinence grade III in para VII (2 alive) **281** lungu repair for total post **IIAb** intrinsic-stress incontinence grade III with atonic bladder component in para I (0 alive) **282 step-by-step** anorectum closure + sphincter ani reconstruction + perineal body repair for sphincter ani rupture in para X (9 alive) **+** clinical lecture about sphincter ani rupture, mechanism of action **283 step-by-step** anorectum closure + sphincter ani/perineal body reconstruction as **early repair** in para I (alive) operated 1x with stool_fla tus incontinence for 12 days
15.00	wardround
15.30	travel by car to katsina
18.30	arrival in hospital selection of partients for next day + administration
19.00	end of working day

kano	no operations since all the staff of kano state is due for personal screen ing of their employment particulars

day 7
sunday 18.09
katsina

07.00	preparations for the day only to find out strike
08.00	administration + documentation
13.30	traveling of chief surgeon by road to kano
17.00	arrival in hotel end of “working” day

kano no operations since clinic day

day 8
monday 19.09
preparations for the day, wardround, surgery, selection of patients, wardround and documentation

day 9
tuesday 20.09
preparations for the day, wardround, surgery, selection of patients, wardround and documentation

day 10
wednesday 21.09
preparations for the day, wardround, surgery, selection of patients, wardround and documentation

day 11
thursday 22.09
preparations for the day, wardround, surgery, selection of patients, wardround and documentation

day 12
friday 23.09

07.00	preparations for the day
08.00	wardrouind
08.30	surgery with step-by-step teaching **302** bilateral pc fascia fixation as **last resort final** for post **IIAb** total intrinsic_stress incontinence III in para VII (0 alive) as **third obstetric leakage** viz post delivery II, III and VII and operated 5x **303** bilateral pc fascia fixation for post **IIAb** total intrinsic_stress inconti nence grade III in para I (0 alive) operated 2x
11.00	evaluation of the training programme by trainees and trainers small closing ceremony handing out of the certificates by dr momah, director department of family health, federal ministry of health, abuja farewell wishes
11.45	postoperative wardround
12.00	end of the working day so that everybody can prepare for the mosque

kees waaldijk MD PhD 25th of september 2011
chief consultant surgeon

participants

dr isyaku dauda	pmo	akth	kano
dr halima bello	senior registrar	guje hosp	abuja
dr duum n kwachukwu	consultant	fmc	bida
dr hadiza a usman	consultant	umth	maiduguri
dr ayodeji olorunsogo	registrar	fmc	gome
dr safiya faruk usman	registrar	akth	kano
mrs edewede glory	sno	fmc	gombe
hajiya mariya mala yusuf	cno	umth	maiduguri
hajiya aish shehu adamu	cno	mmsh	kano
mrs ikupolati naomi f	cno	fmc	bida
dr gabari habib dauda	pmo	mmsh	kano

trainers

dr idris suleiman abubakar	consultant obs&gyn	akth	kano
dr amir iman yola	pmo	mmsh	kano

facilitators pre-, intra- and post-operative care

alh abdullahi haruna	cno	babbar ruga hospital	
hajiya binta musa	cno	mmsh	kano
hajiya asma’u mado	cno	mmsh	
hajiya mairo ahmed	cno	mmsh	
hajiya zainab mohammed	cno	mmsh	
hajiya usaina suleiman	no	mmsh	

chief trainer

dr kees waaldijk	chief consultant surgeon	babbar ruga hospital

vvf workshop zinder

maternité central du zinder

zinder

wednesday 28th september thru saturday 1st ctober 2011

executive summary

since many patients from department du zinder are coming to katsina and kano for their surgery it is important to visit this center on a regular base

the border is just an artificial line since the community of southern niger and northern nigera are the same hausa/fulani with frequent cross-border intermarriage

a total of 16 procedures were performed in 16 patients

the operations varied from complicated to very complicated since the majority of the patients had been operated several times

vvf workshop zinder

sokoto

day-to-day report

28th september thru 1st october 2011

wednesday 28th of september 2011
we left katsina at around 14.30 hr and after some 250 km by toyota jeep we arrived safely in zinder at around 18.30 hr where we checked into the hotel we faced problems at the niger side of the border since our nigerien papers were not in order; after a lot of discussion we managed to pass

thursday 29th of september 2011

six procedures:

01 excision of scar tissue + repair of type **I** sth-cs fistula in para IX (2 alive) operated 1x

02 excision of scar tissue + **complicated** transverse repair + bilateral pcf fixa tion of **extensive IIAa** fistula in para IV (2 alive) operated 1x

03 highly complicated urethra/fascia/avw reconstruction of **severely mutilated** type **IIBa/b** fistula as **final try** in para I (0 alive) operated 5x with healed rvf but still colostomy

04 paraurethra_euo pcf fixation as **last resort** of total post **IIAb** intrinsic_stress incontinence grade III in obese para I (0 alive) operated 2x

05 longitudinal repair + pcf fixation + perineal body reinforcement of residual minute type **IIBb** fistula with **objective** stress incontinence in para III/IV (alive 0) as 2nd/3rd fistula operated in total 7x

06 complicated transverse closure of **mutilated** type **IIAa** fistula in para VII (4 alive) operated 4x

and wardround from **8.00 to 18.30 hr**

friday 30th of september 2011

five procedures:

07 difficult transverse closure + pcf refixation of **mutilated** type **IIAb** fistula in para I (0 alive) operated 7x; with obesity ++

08 complicated urethra “repair” of residual type **IIBa** fistula in para VII (2 alive) operated 6x; with intrinsic incontinence

09 paraurethra_euo pcf fixation of total post **IIAb** intrinsic incontinence in para III (0 alive) operated 3x; with obesity ++

10 urethra/avw reconstruction of **extensive** type **IIBa** fistula in para I (0 alive) operated 3x

11 complicated repair of extensive type **Ib** rvf as minimum surgery first stage in para I (0 alive); operated 4x for vvf (now post IIBb incontinence) + colostomy

and wardround from **8.00 to 18.30 hr**

saturday 1st of october 2011

five procedures

12 transverse repair + pcf refixation of type **IIAa** fistula in para II (1 alive) opera ted 2x

13 transverse repair + pcf fixation of **mutilated** type **IIAa** fistula in para I (alive 0) operated 2x

14 tricky transverse repair of type **I** cs fistula with anterior cervix loss in para V (2 alive) operated 2x; and obesity ++

15 transverse repair + pcf fixation of **mutilated** type **IIAb** fistula in para I (alive 0) operated 1x; with objective stress incontinence

16 highly complicated longitudinal repair of **severely mutilated** type **IIAa** cs-uvcv fistula in para VI (5 alive) operated 8x

and wardround from **8.00 to 15.00 hr**

traveling same 250 km back to katsina where we arrived safely, no problems at the border since we came with fresh papers mun gode Allah

remarks

it looks so simple but learning a trick is not sufficient since it takes a life time of hard intensive study to master the **art & science of obstetric fistula surgery**

time spent

a total of **28 hours** on the workshop and **8 hours** on travelling during 3.5 days

conclusion

it was a fine workshop where **16 operations** were performed in 16 patients

kees waaldijk, MD PhD 5th of october 2011
chief consultant fistula surgeon

many thanks to
the sponsors
waha-international
gouvernment du zinder
all the staff of the maternité central du zinder for their continuing support

vvf workshop maradi

centre hospitalier régional du maradi
maradi

monday 3rd thru saturday 8th october 2011

executive summary

a total of 28 procedures were performed in 28 patients

a total of 4 doctors attended for (further) training

vvf workhosp maradi

sokoto

day-to-day report

3rd thru 8th october 2011

monday 3rd of october 2010
we left katsina at around 14.00 hr and after some 90 km by toyota jeep we arrived safely in maradi at around 16.30 hr where we checked into the hotel where we faced problems with the electricity; no problem at the border since all our papers were in order

tuesday 4th october 2011
we proceeded to centre hospitalier régional du maradi, the venue of the activities, at around 8.00 hr and started to work

seven procedures:

01 transverse repair of type **I** tah-cs fistula whereby abdomen opened in para IV (1 alive) operated 4x with traumatized urethra_euo

02 transverse repair of type **IIAa** fistula and highly complicated longitudinal tah -cs repair in para V (2 alive) operated 2x; obesity ++

03 transverse "repair" of **inoperable type IIAa** fistula as **one last resort final try** in para I (0 alive operated 2x; poor-quality tissue and everything fixed

04 repair of multiple small fistulas as part of **strange** type **IIAa** fistula in para I (0 alive) treated by catheter and caustics

05 repair + pc fascia fixation of minute < 0.1 cm type **IIAa** fistula at tip of ^ structure in para I (0 alive)

06 bilteral ureter catheterization + repair + pc fascia fixation of type **IIa** fistula with bladder base prolapsein para IV (2 alive)

07 catheter treatment followed by bladder drill for long-standing congenital atonic bladder in para 0 **leaking only whilst sitting** for 15 yr since she was born and operated 1x; this is not for surgery

and wardround from **8.00 to 18.30 hr**

wednesday 5th october 2011

seven procedures:

08 state-of-the-art repair with pc fascia repair/fixation of type **IIAa** fistula with **b characteristics** in para VII (alive) operated 2x

09 bilateral ureter catheterization with transverse repair with pc fascia repair/ fixation of type **IIAa** fistula in para I (0 alive)

10 transverse bladder/urethra closure + pc fascia fixation to paraurethra_euo at R of type **IIAa** fistula in para XV (2 alive) operated 3x and leaking for 35 yr

11 longitudinal bladder to pubic bone suturing of minute residual type **IIAb** fistula fixed extremely R in para I (0 alive) operated 3x; small rvf fixed onto i spine R not repaired in the same session

12 transverse repair of type **I** fistula in severely obese para V (0 alive) after cs-sth bco obstructed last twin labor operated 2x and leaking 15 yr

13 transverse closure and bilateral pc fascia refixation of type **IIBb** fistula in para V (2 alive) who delivered 4 times with fistula leaking 21 yr and operated 4x including neourethra
14 urethralization by longitudinal fascia repair and bilateral fixation of post **IIBa** yankan gishiri fistula total urine intrinsic_stress incontinence in para 0
and wardround from **8.00 to 18.30 hr**

thursday 6th of october 2011
eight procedures:
15 bilateral ureter catheterization + "circumferential" repair of type **IIAb** fistula as **early closure** leaking for 58 days
16 repair of "identical" type **I** fistula in para IV (1 alive) after successful repair post delivery I; was only 5 days in hospital for last delivery and nothing done; **?what about prevention?**
17 dilatation of bladder neck stenosis + foley ch 14 in 7-yr-old girl with supra pubic bladder catheter bco urine retention following yankan gishiri by wanzami for resons unknown
18 distal para-"euo" fixation of euo_avw for total post **IIBb** intrinsic incontinen ce in para V (3 alive) operated 7x and leaking 11 yr post delivery IV
19 complicated bilateral ureter catheterization, 4/5 circumferential urethrovesi costomy + bilateral pc fascia refixation for **extremely mutilated IIBb fistula** operated 4x by obstetric fistula tourists
20 assessment of **inoperable IIBb fistula** in para II (1 alive) operated 4x and leaking 32 years
21 transverse repair/bilateral pc fascia fixation + repair of type **IIAa** fistula with in transverse fascia defect in para VII (5 alive) operated 1x
22 severing of redundant lengthening uroplasty and bilateral fixation of "pcf"_ cervix o nto paraurethra_euo atf for total post **IIBb** intrinsic_stress incontinen ce grade III in para II (0 alive) leaking for 20 yr and operated 4x
and wardround from **8.00 to 18.30 hr**

friday 7th october 2011
six procedures:
23 dilatation of euo stenosis, foley ch 18 and assessment of ureter fistula R in para XI (4 alive) to be referred to urologist for abdominal reimplantation
24 urethra_euo narrowing/repositioning R + bilateral pc fascia fixation as **last resort** for total post **IIAb** intrinsic_stress incontinence in para VII (2 alive) ope rated at least 4x and leaking 25 yr
25 excision of excessive scar tissue + transverse fascia repair/bilateral refixa tion with transverse closure of type **IIAb** fistula in para V (3 alive) operated 1x
26 excision of scar tissue + transverse repair of type **IIAa** fistula with additional vacuum trauma in para I (0 alive)
27 transverse pc fascia repair with transverse closure of type **IIAa** fistula in para VI (3 alive) operated 2x and leaking 15 yr
28 bilateral jureter catheterization, circumferential end-to-end vesicourethrosto my + bilateral pcf refixation of type **IIAb** fistula in para I (0 alive) leaking 3 mth
and wardround from **8.00 to 16.00 hr**

saturday 8th october 2011
we left maradi by 9.00 hr, crossed the border in good time and arrived safely in katsina at around 10.30 hr mun gode Allah

remarks
it looks so simple but learning a trick is not sufficient since it takes a life time of hard intensive study to master the **art & science of obstetric fistula surgery**

time spent
a total of **40 hours** on the workshop and **4-5 hours** on travelling during 5 full days

conclusion
it was a fine workshop where **28 operations** were performed in 28 patients

kees waaldijk, MD PhD 9th october 2011
chief consultant fistula surgeon

participants

dr gandar	chr	maradi
dr amadou	chr	maradi
dr yusuf	maternité central	zinder
dr moustapha diallo	maternité tassigui	taoua

many thanks to
the sponsors
waha-international
unfpa
gouvernment du maradi
all the staff of the centre hospitalier du maradi for their support

obstetric fistula surgery training

Babbar Ruga National Fistula Teaching Hospital
Katsina

fifth and last session

training of 4 consultants/doctors and 6 nurses

from monday 17.10 thru sunday 30.10.11

executive summary

the trainees arrived monday 17.10.11 and were handed a cd-rom with 5 books about the obstetric fistula for self-study, a copy of the training manual and a questionnaire

the program was run for a full 12 days of 10 hours each from 8.00 thru 18.00 hr starting and ending with a wardround with in between surgery and lectures

on special request by all the trainees spinal anesthesia became part of the training course and all the participants were able to practice

a **total of 4 doctors** and **6 nurses** attended the intensive training course

out of the **total of 81 operations** performed only one was performed by a trainee doctor under strict supervision with good result; more was not possible since the difficulty grading increased during the course

a **total of 11 clinical and 13 classroom lectures** were delivered where all the different topics were highlighted with special emphasis on the complex obstetric trauma in its broadest sense including total 3° cervix prolapse

a questionnaire was filled out by all participants for self-evaluation

by the end of the course all the participants had a far better understanding of the complex trauma of the obstetric fistula and its causes and of the urine and stool continence mechanism in the female

however, considering the limited time it can only be considered as an introduction to its (surgical) management; but at least they all know exactly what not to do which is very important

on friday 28.10 an official closing ceremony was conducted by the senior special adviser to the president on mdg with guest of honour her excellency the wife of the governor of katsina state where the certificates were handed out to the trainees and afterwards the newly constructed wards, ambulances etc by mdg were commissioned

the trainees travelled home on saturday 12.06.11

fifth and last session

training of 4 consultants/doctors and 6 nurses

from monday 17.10 thru friday 28.10

logbook

day 0
sunday 16.10
07.00 to 18.00 6 operations + preparation of facilities

day 1
monday 17.10
07.00 preparation of hospital
08.00 arrival of first tranees
10.00 small welcome “ceremony” with introduction of participants, outlining of training objectives and tour of the center
12.00 surgery with step-by-step teaching
304 + 305 bilateral ureter catheterization with transverse repair of type **IIAa** fistula and **state-of-the-art** anorectum closure, sphincter ani recon struction and perineal body repair of type **IIb** fistula in para IV (1 alive)
+ clinical lecture about principles of obstetric fistula repair
+ clinical lecture about stool continence mechanism and mechanism of action and reconstructive principles of sphincter ani rupture repair
306 suturing bladder onto symphysis over lungu-lungu type **IIAb** fistulas in para I (0 alive) leaking 5 yr and operated 1x
307 closure + bilateral pc fascia refixation of minute residual type fistula as good result of primary suturing of mutilated **IIAb** fistula in para I (0 alive) operated 3x
308 transverse closure of minute type **I** cs-fistula in para I (0 alive) leak ing 1 yr
309 transverse closure of type **I** fistula against R anterior cervix in para VII (6 alive)
17.00 postoperative wardround
17.30 selection of patients for the training workshop + documentation
18.30 end of working day

day 2
tuesday 18.10
07.00 preparation of the hospital
08.00 handing out cd with books, global competency-based training manual and questionnaire for self-evaluation to all participants
08.30 wardround
09.00 surgery with step-by-step teaching
310 transverse pc fascia repair/bilateral refixation with transverse closure of small lungu type **IIAb** fistula in para I (0 alive) leaking 2 yr and operated 1x
+ clinical lecture about + demonstration of urine continence mechanism and importance of pubocervical fascia + pelvis floor anatomy

311 urethralization by longitudinal fascia repair/bilateral fixation for total post **IIAb** delivery urine intrinsic_stress incontinence grade III in para VII (5 alive)
312 catheterization of L ureter + **early** 4/5 circumferential closure + bila teral pcf refixation of type **IIBb** fistula as **3rd obstetric fistula** in para VII (2 alive) leaking 74 days
313 catheterization R ureter + **early** transverse repair of type **IIAa** fistula with bladder base prolapse in para I (0 alive) leaking 68 days
314 early closure of small type **I** cs-fistula in para **I** (0 alive) leaking for 75 days
315 early closure of small type **IIAa** fistula slightly at R in para II (1 alive) leaking 46 days
316 early closure type **I** cs-fistula in para X (7 alive)
317 complicated longitudinal closure of intracervical type **I cs** fistula in para X (4 alive)

17.30 wardround of postoperative patients
18.00 selection of patients, administration and documentation
19.00 end of the working day

day 3
wednesday 19.10

07.00 preparations for the day
08.00 recap of the previous day
08.30 wardround
09.00 surgery: with step-by-step teaching
318 + 319 circumferential repair with longitudinal fascia repair of type **IIBb** fistula and anorectum/sphincter ani/perineal body reconstruction of type **IIb** fistula in para I (0 alive) with severe iatrogenic trauma by 2 ope rations elsewhere
320 complicated 4/5 circumferential repair with bilateral pcf refixation of type **IIAb** fistula fixed to cephalad symphysis in para VI (2 alive)
321 bilateral fixation of pcf onto paraurethra_euo atf for post **IIBa** total incontinence grade III in para 0; yankan gishiri for ba hanya
322 catheter treatment for postpartum total urine intrinsic incontinence grade III in pare I (0 alive) leaking 18 days
323 catheter treatment for long-standing postpartum atonic bladder in para I (alive) to be followed by bladder drill and then re-evaluation
324 repair of type **I** cs fistula as **second stage** after successful closure of type **IIAa** fistula as **first stage** in para VIII (4 alive)
325 early circumferential repair + pcf fixation of type **IIAb** fistula in para I (0 alive) leaking 67 days
326 repair of residual type **I** tah-cs fistula in para II (all alive) with cervix remnants fixed midline

15.00 two classroom lecture
a sphincter ani rupture; a complex trauma
b fistulas for beginners
16.00 postoperative wardround
16.30 selection of patients, administration and doumentation
19.00 end of the day

day 4
thursday 20.10

07.00 preparations for the day
08.00 recap of the previous day
08.30 wardround
09.00 surgery with step-by-step teaching
327 + 328 state-of-the-art urethralization by longitudinal fascia repair + transverse fixation for total **genuine (IIAb)** intrinsic_stress incontinence and transverse closure of type **Ia** stool fistula in para I (0 alive)
+ clinical lecture about mechanism of incontinence and importance of pubocervical fascia in stabilizing/securing urethra_euo in its anatomic position
329 step-by-step demonstration of excision of scar tissue and para urethra_euo fixation of fascia for post **IIBa** total intrinsic incontinence in para III (all alive); yankan gishiri for 3° cervix prolapse
330 transverse fascia repair/bilateral refixation + uvvf-repair of **second obstetric** type **IIAb** fistula in para VII (1 alive) who had successful cir cumferential repair post delivery I fifteen years ago
331 bilateral ureter catheterization + circumferential repair **first stage** for **"inoperable"** type **IIBb** fistula in para VIII (3 alive) with poor tissue quality and everything fixed due to continuous stool contamination from end-standing sigmoidostomy into vagina of type **Ic** stool fistula
332 catheter treatment for long-standing atonic bladder following cs in para I (0 alive)
333 bilateral ureter catheterization and transverse repair of type **IIAa** fistula as **early closure** in para I (0 alive) leaking 70 days
334 urethralization by longitudinal fascia repair/transverse fixation for post **IIAb** total instrinsic_stress incontinence grade III in para XI (6 alive)
335 longitudinal repair of large type **IIAa** fistula in para VI (1 alive)
no lectures since surgery ended 17.15 hr
17.30 postoperative wardround
18.00 selection of patients, administration and documentation
19.00 end of the day

day 5
friday 21.10

07.00 preparations for the day
08.00 recap of previous day
08.30 wardround
09.00 surgery with step-by-step teaching
336 transverse fascia repair with transverse closure of midline 1.5 cm 0 type **IIAa** fistula with normalization of euo by doctor trainee under direct supervision by chief consultant in para I (0 alive)
337 transverse repair of intracervical type **I** fistula in para III (2 alive); delivery II by cs, now obstetric trauma superimposed upon cs trauma
338 transverse bladder onto posterior cervix remnants closure of type **I** sth-cs fistula in para XII (6 alive)
339 transverse closure + bilateral pcf fixation for minute **second obste tric** lungu type **IIAb** fistula in para III (0 alive); excision of scar tissue ++
13.00 break

16.30 two classroom lectures
c the complex trauma of the obstetric fistula
d pelvis anatomy + pelvis floor anatomy: arcus tendineus fasciae, pubo cervical fascia, levator ani muscle etc etc
17.45 postoperative wardround
18.00 selection of patients, administration and documentation
19.00 end of the day

day 6
saturday 22.10
07.00 selection of patients + preparations for the day
08.00 recap of previous day
two classroom lectures
e genuine intrinsic-stress incontinence and its conservative/surgical ma nagement
f the obstetric trauma in relation to pelvis inlet and structures
08.30 wardround
09.00 surgery with step-by-step teaching
340 state-of-the-art lecture and **step-by-step** demonstration by chief surgeon of circumferential fistula type **IIAb** in para XII (10 alive) with **total circumferential trauma** + 2° cervix prolapse
341 reconstructive surgery of obstetric trauma in severely mutilated type **IIAb** fistula in para III (0 alive) operated 2x and planned for urinary diversion
342 transverse fascia repair + fistula closure of **third obstetric** type **IIAa** fistula within large 5x1 cm transverse pcf defect in para IX (6 alive); previous two fistulas healed by immediate catheter insertion
343 repositioning of euo into anatomic position for post **mutilated** type **IIBa** total intrinsic_stress incontinence in para X (7 alive) operated 3x; the problem mutilation + pull by fixed cervix; as **last resort**
344 complicated repair of minute type **I** fistula fixed to i spine R in para IX (5 alive) following colpocleisis elsewhere
345 assessment of ureter fistula type **III** after cs in para II (0 alive) after successful cs-vcvf-repair
346 ureter catheterization R + transverse repair of large type **I** cs-fistula in para III (2 alive)
16.30 wardround
17.00 selection of partients, administration and documentation
19.00 closure of the day

day 7
sunday 23.10
07.00 preparations for the day
08.00 wardround; trainees preferred to have a rest day
09.00 surgery
347 ureter catheterization L and **real reconstructive surgery** of **2nd obstetric** type **IIAb** fistula in para VIII (1 alive) who delivered 6x after successful fistula repair post delivery II
348 step-by-step identifying and then **systematic reconstruction** of the defects in **genuine intrinsic incontinence** in para X (4 alive)
349 assessment of total post **IIAa** intrinsic incontinence and type **Ic** rvf in para II (0 alive); operation postponed bco heavy stool contamination, no electricity + Sunday

350 assessment of ureter fistula L after sth-cs in para XIII (8 alive) with total intrinsic incontinence; successful type **IIAa** repair 4 mth ago
351 instruction of patient + mother about repeat self-dilatation by torch light covered by condom bco congenital vagina malformation; wanzami yankan gishiri (scarification) without resulting in leaking urine

16.30 wardround
17.00 selection of patients, administration and documentation
18.00 closure of the day

day 8
monday 24.10

07.00 preparations for the day
08.00 recap of saturday
08.15 classroom lectiures
e conservative and surgical treatment of postpartum intrinsic stress incontinence grade III
09.00 wardround
09.30 surgery with step-by-step surgery
352 + 353 reconstructive fascia repair with transverse closure of minute type **IIAa** fistula with total intrinsic incontinence and anorectum repair + sphincter ani reconstruction + perineal body repair of type **IIb** stool fistu la in para III (1 alive) operated 1x for sphincter ani rupture
354 state-of-the-art urethralization as reconstruction by longitudinal fascia repair/refixation for total post **IIBb** intrinsic_stress incontinence grade III in para I (0 alive); both rvf/vvf healed
355 ”repair” of residual **severely scarred** small fistula with objective in trinsic_stress incontinence in para XIV (6 alive)
356 complicated transverse repair of residual small fistula in para IX (0 alive) with postpoliomyelitis syndrome R operated 2x
357 urethra reconstruction for total post **IIAb** intrinsic_stress incontinen ce grade III whereby euo posteriorly drawn inside in para VI (1 alive)
14.00 chief consultant travelled to kano for some other business and for the training of senior registrars from aminu kano teaching hospital
17.00 postoperative wardround
17.30 selection of patients
18.30 end of the day

day 9
tuesday 25.10

07.00 preparations for the day
08.00 recap of previous day
08.30 wardround
09.00 surgery with step-by-step teaching
358 paraurethra_euo fascia fixation for post **IIBb** delivery total intrinsic_ stress incontinence III in para II (0 alive) as **second obstetric leakage** after successful vvf/rvf-repair post delivery I
359 repair of intracervical type **I** cs-fistula in para X (2 a.live) with cervix fixed/retracted
360 assessment of ureter fistula by dye test in para VIII (7 alive); since ureter could not be catheterized referred to urologist for abdominal reimplantation

in kano by chief consultant teaching senior registrars in obs&gyn
361 clinical lecture + transverse fascia repair/fixation with transverse closure of type **IIAa** fistula within large transverse pcf defect in para I (0 alive)
362 step-by-step bilateral ureter catheterization + transverse closure of 2.5 cm 0 type **I/IIAa** cs-fistula with large transverse pcf defect at 3 cm from euo in para VIII (4 alive)
363

13.30 chief consultant travelled back to katsina to continue the training
16.00 classroom lectures by dr halliru idris
f pre-,intra- and postoperative care
g vvf in nigeria
17.00 wardround
17.30 selection of patients
18.30 end of working day

day 10
wednesday 26.10

07.00 preparations for the day
08.00 recap of previous day
08.15 classroom lectures
h classicication of vvf as based on qualitative and qualtitative tissue loss of continence mechanism with consequences for operation technique and prognosis as to healing and as to continence
i classification of rvf as based and involvement of continence mecha nism with consequences fpr operation technique
09.00 wardround
09.30 surgery with step-by-step teaching
364 gradual dilatation of pin-hole non-scarred euo stenosis with dysuria + overflow incontinence **as early management** in para I (alive) leaking 55 days; further catheter treatment as for atonic bladder
365 state-of-the-art longitudinal fascia repair for extensive postpartum cystocele in para X (6 alive); patient delivered 6x vaginally after cervix fixation for 3° cervix prolapse 19.10.03; cervix still more or less in anatomic position which is evidence-based proof that our technique for 3° cervix prolapse is functioning
366 transverse fascia repair/refixation with fistula closure for type **IIAb** fistula in para I (0 alive) with cervix fixed onto i spine R
367 transverse repair of small type **IIAa** fistula in para VI (0 alive) as **second obstetric fistula**; why did it not heal at first attempt?
368 vaginal cystostomy, stone removal and **ps-like** avw closure for stone-induced urge incontinence in para X (4 alive) who had successful vvf-repair in babbar ruga 27 years ago post delivery I
369 ps-like closure of **"inoperable"** type **IIAb** fistula after bladder stone removal in para I (0 alive); after successful closure by multiple repairs she developed bladder stone which perforated into vagina
17.00 postoperative wardround
17.30 selection of patients, administration and documentation
18.30 end of the day

day 11
thursday 27.10

07.00 preparations for the day

08.00 recap of previous day
08.30 classroom lectures by dr kabiru abubakar
j spinal anesthesia
09.00 wardround
09.30 surgery with step-by-step teaching
370 + 371 ps-like repair of **"inoperable"** type **IIAb** fistula with **state-of-the-art** anorectum + sphincter ani + perineal body reconstruction in para I (0 alive) who had postpartum **fournier gangrene** of L vulva resulting in posterior labia loss L
372 clinical lecture + **repeat step-by-step demonstration** of internal sphincter + external sphincter + perineal body reconstructive surgery in para II (all alive) operated 4x
373 stone removal by vaginal cystostomy thru fistula and then repair with bilateral fascia fixation for **second obstetric** type **IIBb** fistula with 2 bladder stones in para V (0 alive) who had successful repair in babbar ruga 15 years ago post delivery
374 transverse repair of small type **IIAa** fistula as **early closure** in para III (2 alive) leaking 63 days
375 circumferential repair by end-to-end vesicourethrostomy with bilate ral fascia refixation for type **IIAb** fistula in para I (0 alive) after catheter treatment failed
376 urethra reconstruction for total post **IIAb** intrinsic_stress incontinen ce whereby euo posteriorly drawn inside in para I (0 alive)
16.30 postoperative wardround
17.00 selection of patients, administration and documentation
19.00 end of the day

day 12
friday 28.10
07.00 preparations for the day
08.00 recap of previous day
08.15 classroom lectures
k immediate management and mass campaign by catheter
l prevention of post IIAa repair incontinence
m extensive obstetric trauma
09.00 wardrouind
09.30 surgery with step-by-step teaching
377 + 378 clininical lecture + step-by-step state-of-the-art circumfe rential repair by end-to-end vesicourethrostomy with bilateral fascia refix ation and then **clinical lecture + step-by-step state-of-the-art** anorec tum + sphincter ani + perineal body reconstruction in para III (0 alive) as **early closure** at 43 days; immediate perineum suturing pp
379 transverse repair with bilateral fascia refixation of type **IIAb** fistula in para I (alive)
13.00 break
16.00 closing ceremony of the whole training programme as organized by fmoh with the attendance of the senior special advisor to the president on mdg with the first lady of katsina state as guest of honour; also present the wife of the deputy governor of katsina state, the commissioner for health, the permanent secretary of health and the permanent secretary of mdg katsina; and the national vvf-coordinator with the desk officer on vvf from fmoh

18.30 tour of the center with commissioning of the new wards, ambulances, generators etc as built/donated by mdg katsina
19.00 end of the day

day 13
saturday 29.10
07.00 preparations for the day
08.00 training continued since we have 3 trainees from ilorin, kwara state, where a new center will be established and 1 international trainee from germany; as well to operate the patients not yet attended to
08.30 wardround
09.00 surgery with step-by-step teaching
380 clinical lecture and **state-of the-art** longitudinal reconstruction of pc fascia in large cystocele in para VII (5 alive); all due to **obstetric trauma**
381 longitudinal **ps-like** avw closure of **"inoperable" ragged** type **IIAa tah-cs** fistula in para XI (8 alive); both ureters identified but cannot be catheterized
382 on special request from patient fixation of 3° cervix prolapse after 8 operations in para I (0 alive) after sth-cs; the stress incontinence does not bother her since she is still living with husband on same compound
383 transverse fibrotic fascia repair + **highly complicated** closure of **mutilated third obstetric** type **IIAa** fistula in para XI (0 alive) after removal of impacted 8x6x5 bladder stone as **first stage**
16.00 postoperative wardround
16.30 selection of patients, administration and documentation
19.00 end of working day

day 14
sunday 30.10
08.30 wardround
09.00 surgery
384 repair of residual fistula with total post **IIBb** intrinsic_stress inconti nence as **last resort** for **second/third obstetric leaking** in para III (0 alive) following multiple repars
11.00 chief surgeon + team travelled 450 km to sokoto for another workshop
17.15 arrival at hotel and end of working day

sincerely yours,

kees waaldijk MD PhD 7th of november 2011
chief consultant surgeon trainer

participants

dr abubakar habibu	pmo	fmc	nguru
alh hassan z tagali	cno	fmc	nguru
mrs yemisi e ojo	cno	fmc	nguru
dr zubairu saad	pmo	fmc	b/kebbi
dr owodunni a adebola	consultant	fmc	gusau
dr okusanya babasola	consultant	fmc	katsina
mrs ewana o sarkin noma	cno	gen hosp	keffi
hajiya saadiya muhammad	cno	fmc	katsina
alh balarabe ayuba samaila	cno	fmc	gusau
hajiya muslimat tayin Ibrahim	cno	fmc	b/kebbi

trainers

dr kabiru abubakar	consultant	kano
dr idris a halliru	moh	katsina

facilitators pre-, intra- and post-operative care

dr abdulmajid mudasiru	cmd	babbar ruga hospital
alh abdullahi haruna	cno	babbar ruga hospital
alh kabir k lawal	cno	babbar ruga hospital
alh gambo lawal	cno	babbar ruga hospital
hajiya adetutu ajagun	cno	babbar ruga hospital
hajiya amina mamman	cno	babbar ruga hospital

chief trainer

dr kees waaldijk MD PhD	chief consultant surgeon	babbar ruga hospital

vvf workshop sokoto/kebbi state

maryam abacha women and children hospital
sokoto

sunday 29th of october thru saturday 5th of november 2011

executive summary

the service depends on several (in)experienced teams from different organizations visiting and operating without any coordination/philosophy which is not optimal for a good functioning

on request by the staff, from time to time we visit this important center to sort out things

however, any trip we have to balance the risks of traveling on dangerous roads, the costs, the efforts and the time spent against the benefits of curing the obstetric fistula patients

a total of 21 procedures were performed in 21 patients

when we left there were still many patients left on the long waiting list in this fistularium; the longer patients stay the more difficult it becomes to rehabilitate them into taking responsibility for their own lives instead of depending upon others

the major problem is that the political will of all the stake-holders involved is missing; there is need for a clear strategy

it is beyond our power and our philosophy to interfere since we are professionals who face already many difficulties in the execution of our reconstructive surgery; we simply do not have time/energy left for anything else

it is team work combined with compassion that counts

we need the government, major aid organizations, politicians and others to create the proper conditions so that we can do our professional job to the best of our knowled ge, skills and conscience in order to establish a sustainable service

vvf workhosp maryam abacha hospital

sokoto

day-to-day report

29th of october thru 5th of november 2011

sunday 29th of October 2011
we left katsina at around 11.00 hr and after some 450 km by toyota jeep we arrived safely in sokoto at around 16.30 hr where we checked into the hotel; we had to make several full stops to avoid head-on collision with on-coming cars on the wrong side of the road

monday 30th of october 2011
we proceeded to maryam abacha women and children hospital in sokoto, the venue of the activities, at around 8.00 hr and waited to start working
however, we were told that they were in the process of organizing the operating theater, consumables etc etc
at around 14.00 hr when it became clear nothing would work we left after we were promised we could work the following day from **8.00 to 14.00 hr**

tuesday 1st of november 2011
four procedures: 4/5 circumferential repair + pcf refixation of type **IIAb** fistula in para II (1 alive), circumferential bladder fixation of type **IIBb** with anorectum/ sphincter ani reconstruction of type **IIb** rvf in para I (0 alive) with healed four-nier gangrene of labia/vulva, proximal fascia rhaphy + pcf fixation + fasciocol posuspension of female epispadias with 2° cervix prolapse
and wardround from **8.00 to 16.00 hr**

wednesday 2nd of november 2011
six procedures: circumferential repair + pcf refixation of type **IIAb** fistula in para I (0 alive), bilateral ureter catheterization + transverse repair under some tension of type **IIAb** fistula in para I (0 alive), transverse repair + pcf refixation of mutilated type **IIBb** fistula in para I (0 alive) operated 3x, assessment of “inoperable” type **IIBb** fistula operated 3x, longitudinal vcvf repair of type **I** cs fistula, transverse fascia repair/fixation of total genuine (post **IIAb**) grade III in trinsic incontinence in para VII (3 alive) with severe obesity
and wardround from **8.00 to 16.30 hr**

thursday 3rd of november 2011
six procedures: urethralization by longitudinal fascia repair of total **genuine** in trinsic incontinence grade III in par I (0 alive), euo-rhaphy + para-euo fixation of total post **IIBa** (yankan gishiri) intrinsic incontinence grade III, complicated primary suturing of mutilated type **IIAb** in para I (0 alive), excision of anterior cervix elongation with bladder/cervix adapation of minute type **I** fistula in para V (2 alive), catheter treatment of **necrotic** type **I** fistula in para II (1 alive) and catheter treatment of **necrotic** type **IIAa** fistula in para I (alive)
and wardround from **8.00 to 16.30 hr**

friday 4th of november 2011

five procedures: transverse repair + pcf repair of type **IIAa** fistula in para III (0 alive) as early closure, ureter catheterization + 4/5 circumferential repair + pcf refixation of type **IIAb** fistula in para I (0 alive), stone removal per fistulam as first stage of type **IIAb** fistula in para I (alive), minimum-surgery 4/5 circumferential repair + pcf refixation of type **IIAb** fistula as early closure in para II (0 alive), transverse repair + pcf fixation of type **IIAb** fistula in para I (0 alive)
and wardround from **8.00 to 16.00 hr**

saturday 5th of november 2011
8.00 hr up to the maishai and then traveling same 450 km back to katsina where we arrived safely at around 15.00 hr mun gode Allah

remarks
we will continue to come to this center since there are many patients in need of our servicve

time spent
a total of **39 hours** on the workshop and **14 hours** on travelling during 6 full days

conclusion
it was a fine workshop where **19 operations** and **2 catheter treatment** were performed in 20 patients

kees waaldijk, MD PhD 7th of november 2011
chief consultant fistula surgeon

many thanks to
the sponsors
waha-international
sokoto state government
all the staff of the maryam abacha hospital for their continuing support

fifth vvf workshop for yobe state

federal medical center

nguru

22nd thru 26th of november 2011

executive summary

since the volatile and violent situation in the north-eastern part of the country had not (yet) reached this area of yobe state we felt safe to travel to nguru

this workshop was the **fifth** in a series of more in order to establish a functioning vvf-repair service for yobe state; all in line with the national vvf masterplan that each state should have its own vvf-repair center to bring the service towards the patients

the workshop itself was fine where a total of 18 state-of-the-art operations were performed in 17 patients

we were not able to attend to all the patients; so when we left there were still patients on the waiting list

fifth vvf workshop for yobe state

federal medical center nguru

22nd thru 26th of november 2011

day-to-day report

introduction
we returned to nguru to collaborate in order to set up a regular vvf service; all in line with the national vvf masterplan that each state should have its own vvf-repair center

day-to-day report of the workshop

tuesday 22nd november 2011
travelling from Kano to Nguru, having perfomed 2 repairs in laure fistula center in kano, some 250 km

wednesday 23th november 2011
surgery **five** procedures: complicated continent urethra/fascia/avw reconstruct-tion of type **IIBa** fistula in para I (0 alive), transverse repair of strange type **I** fistula in para I (0 alive) operated 1x, urethra closure/"reconstruc-tion" of type **IIBa** yankan gishiri fistula bco amenorrhea, excision of scar tissue and transverse repair of minute type **IIAa** fistula in para I (alive) operated 1x, and uvvf repair + kwaskarima of mutilated type **IIBb** fistula in para I (0 alive) operated 2x,
wardround from 8.00 to 18.00 hr

thursday 24th november 2011
surgery **seven** procedures: paraurethra_euo pcf fixation as last resort of "inope rable" post extensive **IIBb** intrinsic incontinence in para II (1 alive) opera ted 4x, transverse repair + fascia fixation of strange type **IIAb** fistula in para I (0 alive), urethralization by longitudinal fascia repair of total **ge-nuine** intrinsic incontinence grade III in para I (alive), transverse repair + pcf refixation of type **IIAb** fistula in para I (0 alive) operated 2x, continent urethra/fascia/avw reconstruction of type **IIBa** yankan gishiri fistula, and transverse repair of type **IIAb** fistula combined with repair of type **I** rvf in para VII (1 alive) operated 4x
wardround from 8.00 to 18.30 hr

friday 25th november 2011

surgery **six** procedures: longitudinal repair of type **I** fistula in para VII (6 alive), mini mum-surgery repair of type **IIAb** fistula with severe obesity in para I (0 alive) leaking 28 yr and operated 2x, circumferential repair of type **IIAb** fistula as first stage of multiple fistulas in para IX (4 alive), transverse repair of type **IIAa** urethrovesicocervicovaginal fistula in para VII (6 alive) operated 2x, transverse repair + pcf fixation of type **IIAa** fistula leaking for 50 yr and operated 1x, and "continent urethra/avw reconstruction" of severely mutilated type **IIBb** fistula in para I (0 alive) operated 1x

wardround from 8.00 to 18.30

saturday 26th of may 2011

after the wardround we proceeded on our trip back directly to katsina over some 400 km where we arrived safely at 15.30 hr mun gode Allah

a **total of 25 hours** were spent during this workshop on surgery and wardrounds and another **12 hours** on traveling during a full 4 days

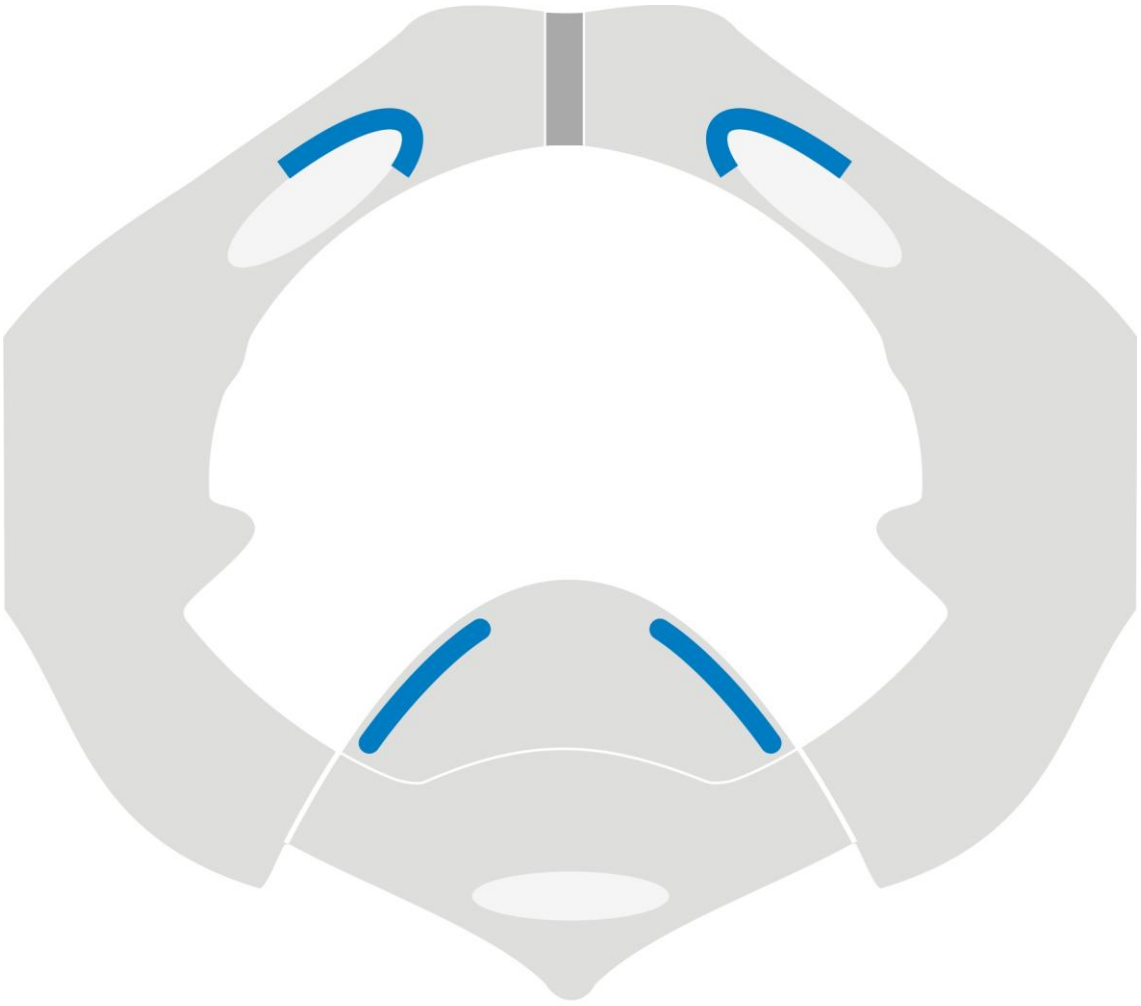
conclusion

it was a fine workshop as fifth step to have a functioning vvf center in yobe state where a total of 18 state-of-the-art operations were performed in 17 patients

however, before we return here we must wait for **complete resolution** of the volatile and violent political situation in the north-eastern part of the country

kees waaldijk MD PhD 30th of november 2011
chief consultant fistula surgeon

many thanks to:
the sponsors
waha-international
federal ministry of health
dr bala, dr mohammed b kawuwa, alhaji hassan z tagali and mrs yemisi e ojo for their dedication/commitment/organization and to the management and all the staff of federal medical center nguru for their support



origin obturator internus + piriformis muscle

Babbar Ruga National Fistula Teaching Hospital

Katsina State

report on VVF/RVF repairs

1984-2011

VVF-repairs:	12,252
RVF-repairs:	1,518
total	**13,770 repairs**

there are three main services within the hospital as obstetric fistula center, referral center for leprosy and referral center for tuberculosis with a very fine hostel annex rehabilitation center just opposite the hospital

under mdg funding four new high-quality wards have been built and two big gene rators installed

both the Ministry of Health and the Ministry of Women Affairs and Social Welfare are highly committed, as is the Governor himself; we are very grateful to the First Lady of the state for her deep compassionate concern

three intensive training workshops were executed with excellent results under fmoh/ mdg/unfpa funding

since started from scrap in January 1984 it has become an important comprehensive obstetric fistula repair, (inter)national training, research and rehabilitation center with good infrastructure and continues to be instrumental in giving thousands of destitute patients a second chance in life; further development is planned

at the 54th national health council of Nigeria babbar ruga hospital was nominated as the national vvf hospital for repair, training, research and documentation

also some fistula surgery is being performed in Funtua General Hospital, Katsina Maternity Hospital, Daura General Hospital, Kankiya General Hospital and Malumfashi Hospital; all the doctors have been trained within the National VVF Project

some 30% of the patients come from neighbouring République du Niger

more staff, doctors and nurses, from Katsina State have to be trained

surgeons: dr yusha'u armiya'u, dr shehu bala, dr halliru idris, dr jabir mohammed, dr aminu safana, dr isah shafi'i, dr abdulrasheed yusuf, dr moses i sunday-adeoye, dr awal sani, dr abdulmajid, dr kabiru abubakar, dr imam amir, dr said ahmad, chief consultant and others

Laure Fistula Center
Murtala Muhammad Specialist Hospital

KANO

Kano State

report on VVF/RVF repairs

1990-2011

VVF-repairs:	8,606
RVF-repairs:	1,139
total	**9,745 repairs**

the obstetric fistula service within Kano State should be a model for the other states since the rehabilitation center annex hostel is outside but near the hospital and managed by the Ministry of Social Welfare; so there is no conflict of interest; the cooperation is fine

both the Ministry of Health and the Ministry of Women Affairs and Social Welfare are highly committed

two intensive training workshops were executed during the year with excellent results under fmoh/mdg/unfpa

it is an excellent place for training nurses and other health personnel, and plays a major role in the training of doctors

although obstetric services are free of charge in the state the system is not function ing, not even in the capital since the majority, some 70%, of our new patients come from within Kano municipality and 30% have even delivered in the same hospital

quite a number of VVF-repairs are performed in Danbatta VVF-Center, Aminu Kano Teaching Hospital, Sheikh Jiddah Hospital, Wudil General Hospital and other hospitals; all the doctors have been trained within the National VVF Project

dr imam amir with over 4,000 repairs is the fistula surgeon i/c

more staff, doctors and nurses, from Kano State have to be trained

surgeons: dr imam amir, dr said ahmed, dr zubairu iliyasu, dr kabiru abubakar, dr idris abubakar, dr hauwa abdullahi, dr muktar hamza, dr habib gabari, dr hadiza galadanci, dr halliru idris. dr abdulrasheed yusuf, dr umaru dikko, chief consultant and others

Fistula Units

B_KUDU, HADEJIA and JAHUN

Jigawa State

report on VVF/RVF repairs

1996-2011

this is mostly the work of dr said ahmed who is involved in the VVF/RVF-repair since 1991; though he left the government service he is still deeply involved

VVF-repairs:	3,080
RVF-repairs:	171
total	**3,251 repairs**

there has been a complete revival of fistula surgery in jahun general hospital since msf france took a serious interest in this place since 2008/09

dr said ahmed and dr kabiru abubakar are the professional motors of the revival; operating during the weekends upon large numbers of patients

two doctors and one nurse were trained, but the problem with msf is the high turnover of staff

though dr kabiru abubakar has left for belarus in order to become a consultant surgeon; during his leave he is still operating upon large number of patients

there are many obstetric fistula patients in jigawa state; if not for msf this center would not be functioning at all

definitely, it needs more commitment of the authorities

nb dr said ahmed is by far the most experienced indigenous Nigerian fistula surgeon with over 6,000 repairs

surgeons: dr said ahmed, dr kabir abubakar, dr isah adamu, dr imam amir, dr salisu babura, dr sunday lengmang, dr sunday-adeoye, chief consultant and others

Maryama Abacha Women and Children Hospital

SOKOTO

Sokoto State

report on VVF/RVF repairs

1994-2011

VVF-repairs:	2,870
RVF-repairs:	197
total	**3,067 repairs**

it is a very important center with good facilities and a high-quality service where many patients present for surgery; it needs further development with regards to manpower in order to perform the 300-400 repairs a year needed

the hospital is under authority of the Ministry of Women Affairs whilst the staff comes under the Ministry of Health

though we have been lobbying hard for many years somewhere along the line we cannot get a grip on this center; partially due to political manouvering of the major organizations

dr ibrahim nakaka makes an effort to perform the simple repairs

some of the patients were operated in uduth during a workshop in the urologic department

the **negative** effect of interfering with this center by .. and unfpa and engender health .. is noted any time we come here; with invasion of this center by engender health in 2007, however not to the benefit of the patients

still, we would like to move forward to develop this center further not only into a major repair center but also into a training center; for this a clear plan of action with reliable commitments of all parties involved is needed

the team from babbar ruga hospital makes a major effort (550 km from katsina) to come “regularly” for 5-day workshops of surgery

more staff, many doctors and many nurses, have to be trained

surgeons: dr nakaka ibrahim, dr abdullahi gada, dr zubairu iliyasu, dr bello tsafe, dr abdulrasheed yusuf, dr halliru idris, dr abdulkarim garba mairiga, dr idris abubakar, dr paul hilton, dr abba wali, dr bello lawal and chief consultant and others

Special Fistula Center

B_KEBBI

Kebbi State

report on VVF/RVF repairs

1996-2011

VVF-repairs:	1,874
RVF-repairs:	65
total	**1,939 repairs**

there is a large backlog in Kebbi State especially of patients with highly complicated fistulas who have been operated several times

dr dantani lantana hes left the center to specialize; and dr hassan wara and dr al moustapha come on irregular base

the hospital is run under the Ministry of Women Affairs whilst the staff comes under the Ministry of Health

the facilities are alright but there is need for a high-quality operating table and good operation lights; otherwise the very difficult repairs cannot be performed

also needed is a rehabilitation unit annex hostel to provide a comprehensive obstetric fistula service for the state

the team from Babbar Ruga Hospital makes a major effort (700 km from Katsina) to come for 3-4 day surgery workshops of the complicated fistulas;

since 2005 unfpa is interfering in a **negative** way with the functioning of the center

definitely, more staff, doctors and nurses, have to be (re)trained

in principle, this hospital has all the potential to become a major repair center; but it seems things have come to a standstill

what is needed is a clear plan of action with commitments of all parties involved to move things forward and ensure a sustainable vvf-repair service

fistula surgeons: dr dantani lantani, dr hassan wara, dr lawal al moustapha, dr oladapu shittu, prof oladosu ojengbede and chief consultant

Kofan Gayan Hospital

ZARIA

Kaduna State

report on VVF/RVF repairs

1998-2011

VVF-repairs:	1,014
RVF-repairs:	83
total	**1,097 repairs**

to my knowledge this hospital is the only center in the world with a successful holistic approach

all patients are offered rehabilitation (family care)

systematically a **selective** caesarean section is offered and performed in subsequent deliveries; for this patients are admitted 2 weeks before expected date of delivery; so **20-25% of all the patients** have delivered a **live** infant in this center following a successful repair

and there are **zero** outcasts amongst the more than 1,000 patients treated so far; even the 6 incurable patients take care of their own lives and have been reintegrated into society since they were provided with skills and means (sewing machine; grinding machine etc); this is **real rehabilitation**

for this, hajiya aisha ahmed and dr ado zakari have to be praised, together with all the staff for their dedication and commitment

the chief medical director of the hospital dr muazu had obstetric fistula training in order to ensure good understanding of the problem and good cooperation; under heineken africa foundation

dr lawal khalid, consultant urologist from abuth, is performing ureter re-implantations in all patients we refer to him; with excellent results

in principle the team from babbar ruga hospital comes once every 2-4 weeks to perform the “difficult” surgery and for on the job training; only the very difficult surgery is referred to katsina; distance from katsina 250 km and via kano 400 km

it is only a matter of time before the major organizations will descend upon this center like **vultures** to claim these achievements as their own

surgeons: dr ado zakarai, dr halliru idris, dr abdulrasheed yusuf, dr joel adze, dr julius gajere, dr husaina adamu, dr lawal khalid and chief consultant

Faridat Yakubu VVF Hospital

GUSAU

Zamfara State

report on VVF/RVF repairs

1998-2011

VVF-repairs:	1,113
RVF-repairs:	39
total	**1,152 repairs**

the existing general hospital has become a federal center and then this hospital has become a general hospital; this is a setback for the obstetric fistula surgery

dr sa'ad idris performs most of the fistula operations

however; after serving his term as the commissioner for health he left the state

there is no plan of action to move things forward

the chief consultant and team used to come here on a regular base for the surgery but due to organizational problems this is no longer possible; though we are willing to return here if the need should arise

surgeons: dr sa'ad idris, dr halliru idris, dr abdulrasheed yusuf, dr imam amir and chief consultant and others

Southeast National Fistula Hospital

ABAKALIKI

report on VVF/RVF repairs

2002-2011

VVF-repairs:	914
RVF-repairs:	68
total	**982 repairs**

this center is one of the two national fistula hospitals in Nigeria

dr moses i sunday-adeoye is the driving force; right from the beginning up till now; and I am sure dr Sunday will write his own far more extensive report

there is high commitment by the federal government, ebonyi state government, the first lady of the state, unfpa and usaid-acquire

for the time being this center seems to depend upon workshops by different visiting consultants with their teams

four training workshops were executed under fmoh/mdg/unfpa funding

there are many patients to demonstrate the fact that the obstetric fistula is all over nigeria and not restricted to certain areas

to move things forward, and the need is certainly there, far more staff, doctors and nurses, have to be trained in order to care for the **many patients in the southeast**

surgeons: dr moses i sunday-adoye, dr sa'ad idris, dr imam amir, dr sunday lengmang, prof oladosu ojengbede, dr hassan wara; dr oladapu shittu, once in a while chief consultant and others

Federal Medical Center

nguru

Yobe State

report on VVF/RVF repairs

2008-2011

VVF-repairs:	123
RVF-repairs:	14
total	**137 repairs**

this service was started in 2008 on special request by dr mohammed kawuwa, chief medical director, who had attended one of our training programs

however, this is only possible by surgical workshops

the perioperative nurse and pre/postoperative matron had been trained some years ago; these two nurses came for an advanced training course in katsina as sponsored by federal ministry of health/mdg whilst 1 doctor came for training

so far, 6 workshops have been executed with excellent evidence-based results

we are all so impressed by the dedication and commitment of all the staff and by the results that we are looking forward eagerly towards our next workshop

in principle we are aiming at 2-3 workshops a year

unfortunately the violent and volatile situation in the state is exploding

surgeons: dr mohammed kawuwa, dr a a kullima, dr kabir abubakar, chief consultant and others

Hopital National /Centre Hospitalier/Maternité Centrale Départemental/Materité Tassigui

ZINDER/NIAMEY/MARADI/TAHOUA

République du Niger

report on VVF/RVF repairs

1996-2011

VVF-repairs:	1,657
RVF-repairs:	104
total	**1,761 repairs**

the obstetric fistula service in zinder is functioning well under the direction of dr lucien djangnikpo; the new vvf center has been constructed but it needs equipment

due to logistic problems the team from babbar ruga hospital could only visit this center once (275 km from katsina)

prof sanda with his long-standing experience in the obstetric fistula surgery is firmly in charge of the vvf-service in hôpital national in niamey

we trained 2 doctors from maradi and executed a training workshop in maradi where 4 doctors attended

both governments of nigeria and niger are committed to continue the south-south cooperation

surgeons: dr lucien djangnikpo, dr akpaki faustin, dr halliru idris, dr tijjani mamman hina, dr abdoullahi idrissa, dr moustapha diallo, dr madeleine garba and chief consultant and others

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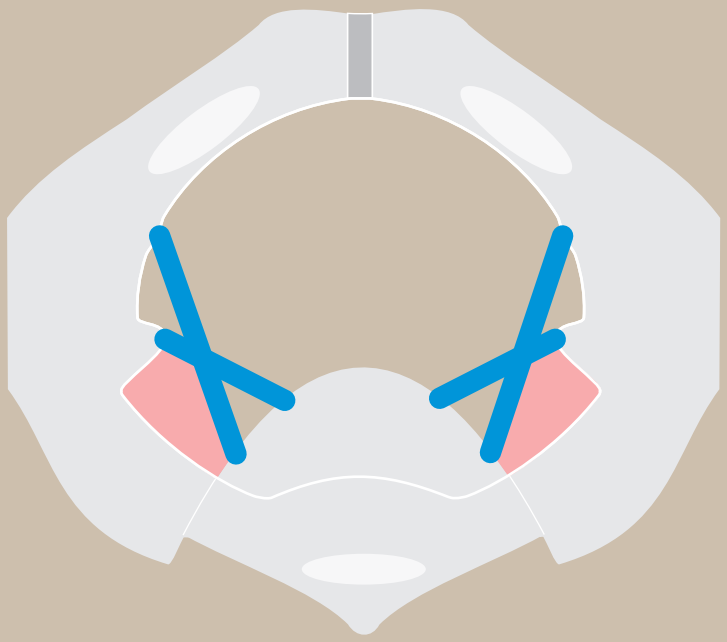
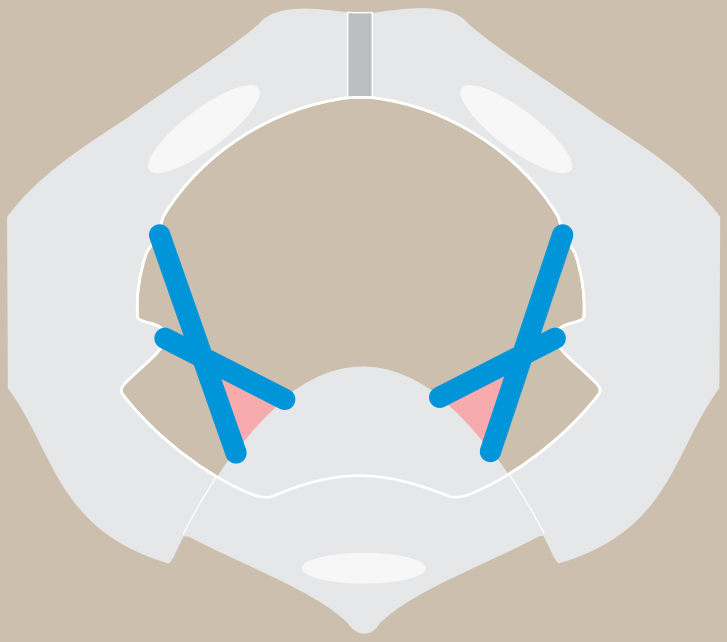


greater sciatic foramen



lesser sciatic foramen