national vvf project nigeria

evaluation report XIX

2002

reprint

Nigeria

Special VVF Center
B_KEBBI

Faridat Yakubu VVF Hospital
GUSAU

General Hospital
HADEJIA

Laure Fistula Center
KANO

Babbar Ruga Fistula Hospital
KATSINA

Maryam Abacha Hospital
SOKOTO

Kofan Gayan Hospital
ZARIA

République du Niger

Centre Hospitalier Départemental
MARADI

Maternité Centrale
ZINDER

kees waaldijk MD PhD

chief consultant surgeon

reprint

sponsored and financed by:
waha-international
paris

national vvf project nigeria

evaluation report XIX

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kees waaldijk

babbar ruga fistula teaching hospital

the obstetric fistula as a social disaster

"carried by her mother and her grandmother this 14-year-young girl was brought into the examination room smelling offensively. Cachectic from the enormous effort and trauma it had taken her to deliver over a period of 4 days a dead male infant without professional help in the bush, she was too weak to support herself; also she had developed bilateral drop feet. The very offensive smell was due to the continuous leaking of urine per vaginam from an extensive urethrovesicovaginal fistula and to the passing of diarrheic stools per vaginam from an extensive rectovaginal fistula with total perineal rupture and sphincter ani rupture; the cervix and uterus could not be identified, most of the paraurethral, deep transverse perineal and levator ani muscles were gone, and the labia minora were (sub)totally lost; in fact she presented with one big cloaca. She had as well deep pressure ulcers over the sacrum and both major trochanters; the wounds over the scapulae had healed off with scar tissue. She did not remember very much as she had been unconscious or semiconscious most of the time. What a change from the proud girl who had been married 3 years ago to an elderly man who did not want to have his wife around anymore. The only proud thing about her now were her breasts, unbelievably still young and full as if nothing had happened, reminding us that this was a young girl whose adolescent and adult life had been wrecked at a time when it should have had started"

if a woman, mostly still a teenager, survives the enormous stress of obstructed labor lasting 2 to 5 or even more days it is for the prize of a dead baby and the complex trauma of the obstetric fistula .... and then the real trouble starts

besides all the other lesions it is the continuous urine leakage wetting her cloths, the bed, the floor etc and the offensive odor which make her unacceptable in any society and deprive her of any dignity

the management of the obstetric fistula has to start the moment it develops not only from a surgical viewpoint but especially to prevent the associated social disaster

every effort has to be made to close the fistula the earlier the better

executive summary

at last one of the big organizations United Nations Fund for Population Activities has become interested in the obstetric fistula by starting an initiative against fistula

this can be considered a major progress since after all those years there may be now some coordination of activities and perhaps some funding on a larger scale and of course renewed interest in **the obstetric fistula as a major public health problem**

after a nation-wide strike by the nurses which lasted 3 months from December 2001 to March 2002 our programme could be executed without further interruptions

despite this strike a total of 1,478 VVF/RVF-reports were performed during the year whilst a total of 41 doctors, 46 nurses and 5 paramedical staff attended our regular training programme or our workshops

special attention was given to Laure Fistula Center in KANO since there was a sharp increase in the number of patients coming forward for treatment

three rewarding workshops were executed, viz in KANO in Nigeria, in MWANZA in Tanzania as organized by Dr Tom Raassen and in DORI in Burkina Faso organized by Dr Jürgen Wacker

our technique (urethralization and anterior fasciocolposuspension) for (postrepair) urine stress incontinence proved to be of value since over 60% of the patients became totally dry; however, if there is no patient compliance with our strict bladder drill upon catheter removal it will not work

it cannot be stressed enough that immediate management by catheter and/or early closure will prevent the associated social disaster of the obstetric fistula; do not waste valuable time, energy and money on things which make no sense but concentrate on the most important thing: **close the fistula** as soon as possible

already some 2,500 girls/women have been cured by this management, before they could become an outcast and without loosing their dignity

by continuing our efforts in the struggle against the obstetric fistula we hope to have an impact upon an almost hopeless situation which will last another 100 years

it is an African major public health problem which can only be solved by the Africans themselves within their African financial and other resources

the Federal Government of Nigeria beomes more and more involved in the obstetric fistula realizing it has to do something about this major public health problem and the same applies to the State Governments

evaluation report XIX

introduction
the obstetric fistula constitutes a social disaster of the highest order; wherever these patients go, whichever place they enter, people turn away from them because of the urine leakage and the offensive smell; and they loose all dignity, as a woman and as a human being
however, not only the general public but also the professionals, like doctors, nurses, social workers etc, turn them down since it is dirty, difficult to handle with high failure rate and the patients poor; and there are few institutions which deal with the obstetric fistula on a structural base
with a minimum of 1,500,000 patients in the whole of Africa and 250,000 in Nigeria alone, **the obstetric fistula is a major public health/social problem on the rise**
how many fistula patients there are exactly nobody knows since in the lost continent of Africa this is a lost entity
prevention, as achieved in the industrialized world over a period of 100 years, is only possible by establishing a network of 75,000 to 100,000 functioning obstetric units throughout inhabited (rural) Africa which is a utopia for another 100 years
the best rehabilation into society is by a successful closure of the fistula and for the moment we have to concentrate upon this aspect
prevention of the social disaster is very well feasible by the **immediate management** by catheter and/or early closure; treatment has to start **the moment the girl/woman has developed a fistula** and not after a minimum period of 3 long months
this VVF Project aims to have an impact upon this hopeless situation by providing a VVF service, by establishing VVF centers, by training all kinds of doctors, nurses and paramedical personnel, by providing training materials and by health education with the emphasis of keeping it simple, safe, effective, feasible, sustainable and payable under African conditions

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
the 9 established centers are capable of dealing with the obstetric fistula within a radius of 100-120 km; however, this is not sufficient by far

short-term objectives
to further upgrade the repair and training services in the existing centers and to start new centers
BIRNIN KEBBI
Dr Hassan WARA has been transferred to the Federal Medical Center as the Medical Director but he still continues to do some work in the fistula center
GUSAU
the work is satisfactory though the center has been converted into a general hospital and another hospital for women and children is under construction
HADEJIA
Dr Said AHMED still performs repairs; we are waiting for a proper operating table in JAHUN, then we can start working there
KANO
by a major effort the situation is more or less under control; a large proportion of the patients come from within KANO city but they wait too long seeking professional help; the workshop was a success
national training center
the training of doctors is functioning well but we could handle more nurses
KATSINA
still remains the base of all our activities; we do not notice yet a reduction in the number of patients coming from République du Niger

international training center
the training of doctors is functioning well but we could handle more nurses; since the center becomes more and more known the interest is rising
SOKOTO
with the arrival of a new medical officer i/c the cooperation is becoming better and in due time it will become a fine center
ZARIA
plans have been made for a total structural face-lift which was highly needed
MARADI/ZINDER in République due Niger
the cooperation with Dr Djangnikpo LUCIEN has intensified; beginning of next year the new VVF center in ZINDER will be opened, insha Allah!
new centers
the next target is to establish a VVF center in Eastern and Western Nigeria since the obstetric fistula is everywhere from north to south and from east to west but for this we need the cooperation of the people on ground

traveling rhythm
it is not easy to travel by car 1,200-1,500 km a week, and an executive 4/WD Toyota Land/Cruiser is needed for safety and comfort

activities (see annexes)
surgery
despite a strike by the nurses lasting 3 months, over the year a total of 1,478 procedures were performed in the 9 different centers making a
grand total of 17,412 operations: 15,993 VVF-repair and 1,419 RVF-repairs
postgraduate training
the coordination was done by GHON
this was intense, 41 doctors, 46 nurses and 5 paramedical staff making a
grand total of 432 persons: 207 doctors, 202 nurses and 23 other persons
workshops
the consultant surgeon (co)facilitated 3 workshops, one in KANO, one in MWANZA in Tanzania (organized by Dr Tom Raassen) and one in DORI in Brukina Faso (organized by DrJürgen Wacker) making a **grand total of 9 workshops**

research
this is a continuous process with ups and downs; the intention was, is and will be to make complicated things simple, safe, effective, feasible, sustainable and payable under African condition
general surgical principles
the **principles of septic surgery** cannot be overvalued since the vagina is not sterile: water-tight closure of the bladder, air-tight closure of the rectum whilst the anterior/posterior vagina walls are only adapted, half closed or left open
the **classification** in small, medium, large and extensive is useful in assessing tissue damage and extent of operation and with regards to prognosis
VVF
the **classification** in type I, IIAa, IIAb, IIBa, IIBb and III is well established now and very useful with regards to operation technique and prognosis
the **circumferential repair** by end-to-end vesicourethrostomy is the standard technique for the circumferential fistula type IIAb; the same principles are being applied in type IIBb fistulas where an additional urethra reconstruction is necessary
urethralization and anterior fasciocolposuspension is now standard in severe (post-repair) urine stress incontinence; it has highly promising theoretical and practical potentials with a total dryness in over 60% of the patients
the **immediate management** by catheter and/or early closure cured 2,500 patients and prevented them from becoming an outcast

urethra reconstruction with anterior fasciocolposuspension was started recently in type IIBa and IIBb fistulas with excellent results

preoperative high oral fluid intake ensures patient compliance, makes it easier to find the ureters during operation and lessens the incidence of blocked catheters postoperatively
RVF
though the classification in type Ia, Ib, Ic, IIa, IIb, IIIa, IIIb and IV is useful with regards to operation technique no conclusions can be drawn regarding prognosis

funding
basically the project is funded by the Federal Government and by the individual State Governments but this is not sufficient
further funding came from the Scandinavian Society Nigeria and from several Dutch NGOs among which the SK Foundation in combination with the TTT Foundation are the most important

new world-wide development
having lobbyed for more involvement by the industrialialized world at WHO, UNDP, UNFPA, large NGOs and Governments since 1989, all to no avail, at last the United Nations Fund for Population Activities has started an **initiative against fistula**
this year we were invited to attend the meeting in ADDIS ABABA in Ethiopia which Dr Abdulrasheed YUSUF attended
this may be the start of world-wide interest with coordination and funding on a larger scale

conclusion
though there is a continuous improvement in the quantity and quality of this project in terms of service, training and research far more has to be done to solve this major public health problem
that UNFPA has started an initiative against fistula is a hopeful sign which may be the beginning of raising the international attention the obstetric fistula deserves
the road is long, twisted and slippery but it is worthwile to something to restore health and dignity in those unfortunate (teenage) girls/women whose life has been shattered medically, socially and mentally

kees waaldijk, MD PhD
chief consultant fistula surgeon

surgery 1984-2002

	B/KEBBI		GUSAU		HADEJIA*		KANO		KATSINA		SOKOTO		ZARIA		MARADI/ZINDER		
	VVF	RVF	VVF	RVF	VVF	RVF	VVF	RVF	VVF	RVF	VVF	RVF	VVF	RVF	VVF	RVF	grand 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	41	-	-	-	86	-	311	37	562	60	98	5	-	-	66	2	1,268
1997	107	2	-	-	211	4	295	38	513	55	181	14	-	-	33	2	1,455
1998	37	4	30	6	185	5	278	28	416	60	288	34	42	4	43	4	1,464
1999	80	5	64	3	30	3	280	36	441	62	238	12	37	3	49	2	1,345
2000	108	4	102	5	204	7	283	41	420	60	134	16	102	7	69	7	1,569
2001	98	4	65	5	170	5	415	41	515	55	157	9	80	1	74	5	1,699
2002	55	3	42	3	83	3	464	49	453	41	144	7	44	2	82	3	1,478
total	**526**	**22**	**303**	**22**	**969**	**27**	**4,386**	**468**	**7,655**	**680**	**1,443**	**108**	**305**	**17**	**416**	**25**	**17,333**

***Dr Said AHMED**

total VVF-repairs and related operations: **14,556** + in workshops **70** = **15,993**

total RVF-repairs and related operations: **1,299** + in workshops **9** = **1,419**

grand total 17,412

success rate at VVF closure roughly **90%** per operation

success rate at RVF closure roughly **85%** per operation

success rate at **early closure** roughly **95%** per operation

healed by catheter only: **738**

wound infection rate: **< 0.5%**

postoperative mortality rate: **0.5-1%**

overall success rate (after one or more operations) at closure: **97-98%**

severe stress/urge incontinence rate after successful closure: **2-3%**

a **grand total of 432** doctors, nurses/midwives, other highly educated persons and paramedical staff were trained/attended our training programmes:

a total of **207 doctors**
- 101 general doctors with 3 years of surgical experience
- 82 consultant gynecologists/surgeons/urologists
- 22 senior registrars in gynecology/obstetrics
- 2 senior registars in anesthesia

a total of **202 nurses/midwives**
- 137 pre- and/or postoperative nurses/midwives
- 52 operating theater nurses
- 13 anesthetic nurses

a total of **3 other academic persons**
- 1 anthropologist
- 1 sociologist
- 1 physiotherapist

a total of **20 paramedical persons**

the objectives of the training are to demonstrate/learn the complex trauma of the obstetric fistula and the noble art of its (surgical) management under primitive African conditions:

systematic history taking

systematic (vaginal) examination, including peroneal nerve trauma grading

spinal anesthesia as the anesthesia of choice

basic surgical principles of VVF/RVF-repair

importance of proper instrument handling

importance of high oral fluid intake pre- and postoperatively

importance of indwelling FOLEY Ch 18 catheter

immediate catheter and/or early closure to **prevent the social disaster**

to stress to each trainee his own limits: know what one can handle and what not; it is not a shame if one refers a patient to someboy more experienced

importance of proper documentation

patient counseling

NB workshops only act as a stimulation and cannot replace formal training

immediate bladder **catheter**ization for 4 weeks combined with **high oral fluid intake** will **cure 15-20%** of the patients with a **fresh obstetric fistula!!!!!**

operations by chief consultant

	VVF	RVF	total
Nigeria			
BIRNIN KEBBI	71	10	81
GUSAU	77	16	193
HADEJIA	-	-	-
KANO	3,453	444	3,897
KATSINA	6,384	704	7,088
SOKOTO	675	94	769
ZARIA	162	15	177
République du Niger			
MARADI	72	6	78
ZINDER	153	12	165
Kenya			
MACHAKOS	13	2	15
Tanzania			
DAR ES SALAAM	25	2	27
MWANZA	14	2	16
Burkina Faso			
DORI	18	3	21
total	**11,217**	**1,310**	**12,527**

known performance of trainees

Dr Said AHMED	over 1,500 repairs
Dr Idris HALLIRU	over 800 repairs
Dr Immam AMIR	over 700 repairs
Dr Ilyasu ZUBAIRU	over 550 repairs
Dr Yusha'u ARMIYA'U	over 400 repairs
Dr Aliyu SHETTIMA	over 400 repairs
Dr Hassan WARA	over 400 repairs
Dr Bello Samaila	over 350 repairs
Dr Abdulrasheed YUSUF	over 300 repairs
Dr Jabir MOHAMMED	over 300 repairs
Dr Djangnikpo LUCIEN	over 150 repairs
Dr Aminu SAFANA	over 150 repairs
Dr Idris ABUBAKAR	over 100 repairs
Dr Isah I SHAFI'I	over 100 repairs
Dr Julius M KIIRU	over 70 repairs
Dr Fred KIRYA	over 40 repairs
Dr Khisa W WAKASIAKA	over 30 repairs

no data are available for the other trainees

Special Fistula Center

B_KEBBI

Kebbi State

report on VVF/RVF repairs

1996-2002

VVF-repairs:	526
RVF-repairs:	22
total	**548 repairs**

success rate at VVF closure roughly 90% per operation

success rate at RVF closure roughly 85% per operation

wound infection rate:	< 0.5%
postoperative mortality:	0%

overall success rate (after one or more operations) at closure:	97-98%
final severe stress/urge incontinence rate after successful closure:	2-3%

Faridat Yakubu VVF Hospital

GUSAU

Zamfara State

report on VVF/RVF repairs

1998-2002

VVF-repairs:	296
RVF-repairs:	22
total	**318 repairs**

success rate at VVF closure roughly 90% per operation

success rate at RVF closure roughly 85% per operation

wound infection rate:	< 0.5%
postoperative mortality:	0%

overall success rate (after one or more operations) at closure:	97-98%
final severe stress/urge incontinence rate after successful closure:	2-3%

Fistula Center General Hospital

HADEJIA

Jigawa State

report on VVF/RVF repairs

1996-2002

VVF-repairs:	1,029
RVF-repairs:	31
total	**1,060 repairs**

success rate at VVF closure roughly 90% per operation

success rate at RVF closure roughly 85% per operation

wound infection rate:	< 0.5%
postoperative mortality:	0%

overall success rate (after one or more operations) at closure:	97-98%
final severe stress/urge incontinence rate after successful closure:	2-3%

Laure Fistula Center Murtala Muhammad Hospital

KANO

Kano State

report on VVF/RVF repairs

1990-2002

VVF-repairs:	4,262
RVF-repairs:	461
total	**4,723 repairs**

success rate at VVF closure roughly 90% per operation

success rate at RVF closure roughly 85% per operation

wound infection rate:	< 0.5%
postoperative mortality:	0.5-1%

overall success rate (after one or more operations) at closure:	97-98%
final severe stress/urge incontinence rate after successful closure:	2-3%

Babbar Ruga Fistula Hospital

KATSINA

Katsina State

report on VVF/RVF repairs

1984-2002

VVF-repairs:	7,571
RVF-repairs:	718
total	**8,289 repairs**

success rate at VVF closure roughly 90% per operation

success rate at RVF closure roughly 85% per operation

wound infection rate:	< 0.5%
postoperative mortality:	0.5-1%

overall success rate (after one or more operations) at closure:	97-98%
final severe stress/urge incontinence rate after successful closure:	2-3%

Maryama Abacha Hospital

SOKOTO

Sokoto State

report on VVF/RVF repairs

1994-2002

VVF-repairs:	1,414
RVF-repairs:	106
total	**1,520 repairs**

success rate at VVF closure roughly 90% per operation

success rate at RVF closure roughly 85% per operation

wound infection rate:	< 0.5%
postoperative mortality:	0%

overall success rate (after one or more operations) at closure:	97-98%
final severe stress/urge incontinence rate after successful closure:	2-3%

Kofan Gayan Hospital

ZARIA

Kaduna State

report on VVF/RVF repairs

1998-2002

VVF-repairs:	308
RVF-repairs:	17
total	**325 repairs**

success rate at VVF closure roughly 90% per operation

success rate at RVF closure roughly 85% per operation

wound infection rate:	< 0.5%
postoperative mortality:	0%

overall success rate (after one or more operations) at closure:	97-98%
final severe stress/urge incontinence rate after successful closure:	2-3%

Maternité Centrale/Centre Hospitalier Départemental

ZINDER/MARADI

République du Niger

report on VVF/RVF repairs

1996-2002

VVF-repairs:	416
RVF-repairs:	24
total	**440 repairs**

success rate at VVF closure roughly 90% per operation

success rate at RVF closure roughly 85% per operation

wound infection rate:	< 0.5%
postoperative mortality:	0%

overall success rate (after one or more operations) at closure:	97-98%
final severe stress/urge incontinence rate after successful closure:	2-3%

classification of vesicovaginal fistulas

kees waaldijk

classification of fistulas according to anatomic/physiologic location

I not involving the closing mechanism

II involving the closing mechanism
- **A** without (sub)total urethra involvement
  - **a** without circumferential defect
  - **b** with circumferential defect
- **B** with (sub)total urethra involvement
  - **a** without circumferential defect
  - **b** with circumferential defect

III miscellaneous, e.g. ureter and other exceptional fistulas

further classification as to size

small	< 2 cm
medium	2-3 cm
large	4-5 cm
extensive	≥ 6 cm

classification of rectovaginal fistulas

kees waaldijk

classification of fistulas according to anatomic/physiologic location

I	proximal fistulas	
	a without rectum stricture	
	b with rectum stricture	
	c with circumferential defect	very seldom
II	midvaginal fistulas	
	a without rectum stricture	
	b with rectum stricture	very seldom
III	distal fistulas	
	a without sphincter ani involvement	
	b with sphincter ani involvement	
IV	miscellaneous, e.g. ileouterine fistulas after instrumental abortion	

further classification as to size

small	< 2 cm
medium	2-3 cm
large	4-5 cm
extensive	$\underline{\geq}$ 6 cm

closure of type I fistulas	transverse
in type Ib	with disruption of rectum stricture
in type Ic	(abdomino)vaginal approach with end-to-end recto-rectostomy and colostomy
closure of type II fistulas	transverse or longitudinal
in type IIb	with disruption of rectum stricture
closure of type III fistulas	longitudinal
in type IIIb	with sphincter ani/perineal body reconstruction
closure of type IV fistulas	depending upon the situation

urine continence mechanism
in the female

kees waaldijk

I bladder neck
- **a** trigone
- **b** trigonal ring
- **c** the two detrusor loops

II urethra
- **A** intrinsic urethra closing mechanism: mucosa seal/coaptation
  - **a** urethra mucosa
  - **b** submucosal vascular plexus
  - **c** longitudinal smooth muscle fibers
  - **d** circular smooth muscle fibers
  - **e** elastic and connective tissue of urethra wall

  these structures are estrogen influenced
  - **f** length of urethra; if it is < 1.5 cm there is little chance of being continent
  - **g** caliber of urethra: physical law: the smaller the curve of a tube-like structure the stronger the centripetal forces
- **B** extrinsic urethra closing mechanism: U-shaped striated muscle fibers
  - **a** 60-70% slow-twitch muscle fibers; maintaining contraction/tonus over long periods of time
  - **b** 30-40% fast-twitch muscle fibers; reflex contraction at sudden intra-abdominal pressure rise

III anatomic/physiologic support of urethra and bladder neck
- **A** static
  - **a** pubourethral ligaments
- **B** dynamic
  - **a** elastic pubocervical fascia extending bilaterally into urethrovesicopelvic ligaments
  - **b** pubococcygeus musculature

IV intact innervation of these components

since there is **no sphincter muscle** and since the posterior urethra is firmly attached to the elastic pubocervical fascia there is no circular closure of the urethra but **coaptation of the anterior urethra against the posterior urethra** whilst additionally the elastic pubocervical fascia **compresses the urethra** against the posterior symphysis **with a maximum against the inferior or caudad third of the posterior symphysis**

factor I keeps the urethrovesical junction closed; factors I, II and III keep the urethra stretched and the anterior urethra wall coapted against the posterior urethra wall whilst factor III stabilizes the urethra in its position and compresses it against the posterior pubic symphysis with a maximum at the mid-urethra; factor IV is the coordinator; the trigone seems to be the stabilizing structure towards which the bladder contracts and towards which the urethra shortens at spontaneous miction

at rest during the filling phase of the bladder these mechanisms maintain closure of urethrovesical junction and urethra; when the bladder fills up more these forces increase via impulses from baroreceptors

voluntary increase of these forces is possible by contraction of the pubococcygeus musculature with stretching of the pubocervical fascia and contraction of the fast-twitch striated muscle fibers of the urethra to postpone voluntary miction for a short period of time

at sudden intraabdominal pressure rise there is a reflex contraction of the pubococcygeus musculature with contraction of the fast-twitch muscle fibers and stretching of the pubocervical fascia maintaining the urethra stretched whilst its compression against the posterior pubic symphysis increases; this takes place a few milliseconds before there is an increase in intravesical pressure since first the diaphragm, the anterior abdominal musculature and the pubococcygeus musculature contract at cough and this causes intraabdominal pressure rise a few miliseconds later
there is no pressure transmission involved keeping the urethra closed; how could it reach the urethra before reaching the bladder? and how would it close the urethra? as pressure exerted on a fluid is transmitted evenly in all directions
if these mechanisms are deficient, for whatever reason, stress incontinence develops

at urge incontinence there are involuntary contractions of the detrusor muscle without reflex increase in these forces setting involuntary miction in motion whilst voluntary increase in these forces is too weak and too short to stop miction

at the beginning of voluntary miction the two detrusor loops relax whilst the longitudinal detrusor muscle contracts with additional relaxation of the detrusor loops, the pubococcygeus musculature relaxes with relaxation of the fast-twitch muscle fibers of the urethra and with relaxation of the pubocervical fascia, the longitudinal smooth musculature of the urethra contracts whilst the circular smooth musculature and the slow-twitch muscle fibers relax resulting in urethra shortening with an increase in its diameter; so, the forces which close the urethra decrease whilst intravesical pressure increases and the urethra opens up from proximally, from the urethrovesical junction, towards distally, towards the external urethra opening and stays open during miction

at the end of miction the opposite takes place and the urethra stretches with a decrease in its diameter; so, the forces which close the urethra increase whilst intravesical pressure decreases and the urethra closes from distally, from the distal-mid urethra, towards proximally, towards the urethrovesical junction

there is no sphincter and pressure transmission is not involved closure is by anterior to posterior coaptation and by compression

recommendations
vvf-repair, -training and -research
in the existing centers
Nigeria

Babbar Ruga Hospital
Katsina State

Laure Fistula Ward of Murtala Muhammad Specialist Hospital
Kano State

Maryama Abacha Women and Children Hospital
Sokoto State

Kofan Gayan Hospital
Kaduna State

Special VesicoVaginal Fistula Hospital
Kebbi State

Special VVF Hospital
Zamfara State

Jahun VesicoVaginal Fistula Hospital
Jigawa State

kees waaldijk MD PhD
chief consultant surgeon

recommendations
vvf-repair, -training and -research
Nigeria

table of contents

recommendations for the national vvf-project nigeria

executive summary

I buildings

for any VVF center to function it is a must to have a hostel with rehabilitation facilities

therefore the following is needed

main three repair centers:
1. Babbar Ruga Hospital KATSINA
   rehabilitation center within hospital compound
2. Laure Fistula Center KANO
   rehabilitation center within Kwalli Hostel
3. Maryama Abacha Women and Cildren Hospital SOKOTO
   40-bed hostel with rehabilitation center outside hospital premises

the other four centers:
4. Special VVF Hospital in BIRNIN_KEBBI
   20-bed hostel with rehabilitation facilities
5. Kofan Gayan Hospital ZARIA
   20-bed hostel with rehabilitation facilities
6. Special VVF Center GUSAU
   20-bed hostel with rehabilitation facilities
7. Special VVF Hospital JAHUN
   rehabilitation facilities within existing hostel

II special equipment

a well-functioning hydraulic operating table with shoulder supports and leg holders is a **must** together with good operating light

the main three centers
1. Babbar Ruga Hospital — one hydraulic operating table and light
2. Laure Fistula Center — one hydraulic operating table and light
3. Maryama Abacha Hospital — one hydraulic operating table and light

the other four centers all need a well-functioning hydraulic operation table with operating lights; **N.B.** the only thing missing in Jahun VVF Hospital is a well-functinoning hydraulic operating table, then we can work

III transport

visiting all the centers by the surgical team requires some 1200-1500 km of driving per week by car on rough and dangerous roads. For security reasons (accidents) and for comfort a TOYOTA Landcruiser executive type is needed

IV allowance for the trainees

since most states are not giving the trainees an allowance either the Federal Government should consider this or else should instruct the individual states to pay the trainees an allowance

V training allowances for staff in KANO and KATSINA

since the two theater nurses and the nurse i/c postoperative ward in KANO and in KATSINA are actively involved in the training of doctors and nurses, it is recommended that they are entitled to their training allowances; in total six nurses, 3 in KANO and 3 in KATSINA. The same applies to the two deputy doctors, 1 in KANO and 1 in KATSINA; and to the logistic officer

VI National Workshop on VVF

it is time for the Federal Government to organize a National Workshop on VVF in ABUJA for doctors and nurses from all the 36 States

VII one VVF center in Western Nigeria

one hospital has to be selected as a VVF-repair and VVF-training center in Western Nigeria after doctors and nurses have been trained

VIII one VVF center in Eastern Nigeria

one hospital has to be selected as a VVF-repair and VVF-training center in Eastern Nigeria after doctors and nurses have been trained

do not start fistularia

NB we should make an effort to provide a **short-term service** for the period of the operation/rehabilitation but we should **not allow** our centers to become **fistularia** where we take full responsibility for the patients for the rest of their life and where the incurable patients **terrorize** the place and **prevent us to perform our normal work**

recommendations

Babbar Ruga Hospital

KATSINA

Katsina State

this is one of the main VVF-repair and VVF-training centers and needs special attention; it consists of 37 postoperative beds and a 150-bed hostel within the hospital compound; there is a 2-bedroom hostel for trainees

it should be able to cope with up to 1,000-1,500 operations per year and to train up to 15-20 doctors and up to 50-60 nurses per year

first priority

equipment
- hydraulic operating table
- operating light
- two full sets of instruments

manpower
- six to eight doctors have to be trained for Katsina State
- twenty to thirty nurses have to be trained for Katsina State

buildings
- rehabilitation facilities within Babbar Ruga Hospital

guesthouse
- a 4-room guesthouse to provide accommodation for the trainees; this should be rented and then furnished

phase two

- two Air Conditioners for the operation theater
- an autoclave
- a sterilizer

recommendations

Laure Fistula Center of Murtala Muhammad Specialist Hospital

KANO

Kano State

this is one of the main VVF-repair and VVF-training centers and needs special attention; it consists of 32 postoperative beds and Kwalli Hostel with a capacity of 50-60 beds outside the hospital premises

it should be able to cope with up to 1,000-1,500 operations per year and to train up to 10-15 doctors and up to 50-60 nurses per year

first priority

equipment

hydraulic operating table
operating light
two full sets of instruments

manpower

six to eight doctors have to be trained for Kano State
twenty to thirty nurses have to be trained for Kano State

buildings

another 20-bed postoperative ward
rehabilitation facilities within Kwalli Hostel

guesthouse

a 4-room guesthouse to provide accommodation for the trainees; this should be rented and then furnished

phase two

standby 7.5 kVA diesel generator for the VVF operation theater
two Air Conditioners for the operation theater
an autoclave and a sterilizer

phase three

since the number of patients are increasing daily slowly more hospitals should be incorporated in the VVF-repair service

recommendations

Maryama Abacha Women and Children Hospital

SOKOTO

Sokoto State

the hospital was specifically built for VVF and consists of a twin operation theater (without outside windows) and 40-bed postoperative wards

it is one of the main VVF-repair centers; however, there is no hostel and if we do not take care it will turn into a fistularium

it should be able to cope with up to 7,500-1,000 operations per year

first priority

equipment
- hydraulic operating table
- operating light
- two full sets of instruments

manpower
- six to eight doctors have to be trained for Sokoto State
- twenty to thirty nurses have to be trained for Sokoto State

buildings
- 50-bed hostel with rehabilitation facilities outside hospital

phase two

- standby 7.5 kVA diesel generator for the VVF operation theater
- two Air Conditioners for the operation theater
- an autoclave and a sterilizer

recommendations

Kofan Gayan Hospital

ZARIA

Kaduna State

originally it was a health center which was converted into a general hospital; there is a 12-15 bed postoperative VVF ward; the operation theater and the operating equipment is below standard; and there is no water supply

this center should be able to cope with 250-300 operations per year

first priority

equipment
- hydraulic operating table
- operating light
- full set of instruments
- autoclave
- sterilizer

manpower
- three doctors have to be trained
- eight nurses have to be trained

buildings
- operation theater
- 20-bed postoperative ward
- 20-bed hostel with rehabilitation center outside hospital

water supply
- an effort should be made to provide a clean water supply

phase two

if the place is fully operating, and if there is need, it can be extended
standby 7.5 kVA diesel generator for VVF operation theater

recommendations

Special VesicoVaginal Fistula Hospital

BIRNIN_KEBBI

Kebbi State

this hospital was specifically built for VVF; however, the standard is not very high; there are some 30-40 beds and there is no hostel

this hospital should be able to cope with 250-300 operation per year

first priority

equipment
- hydraulic operating table
- operating light
- full set of instruments

manpower
- three doctors have to be trained
- eight nurses have to be trained

buildings
- 20-bed hostel with rehabilitation center outside hospital

phase two

if the place is fully operating, and if there is need, it can be extended
standby 7.5 kVA diesel generator for VVF operation theater

recommendations

Special VesicoVaginal Fistula Center

GUSAU

Zamfara State

Zamfara State Government is in the process of shifting the VVF-activities from Faridat Yakubu Hospital to another place; at the moment we do not know exactly what is there and what not

this center has to be able to cope with some 250-300 operations per year

first priority

equipment
- hydraulic operating table
- operating light
- full set of instruments

manpower
- three doctors have to be trained
- eight nurses have to be trained

buildings
- 20-bed hostel with rehabilitation center outside hospital

phase two

if the place is fully operating, and if there is need, it can be extended

recommendations

Special VesicoVaginal Fistula Center

GUSAU

Zamfara State

Zamfara State Government is in the process of shifting the VVF-activities from Faridat Yakubu Hospital to another place; at the moment we do not know exactly what is there and what not

this center has to be able to cope with some 250-300 operations per year

first priority

equipment
- hydraulic operating table
- operating light
- full set of instruments

manpower
- three doctors have to be trained
- eight nurses have to be trained

buildings
- 20-bed hostel with rehabilitation center outside hospital

phase two

if the place is fully operating, and if there is need, it can be extended

recommendations

Special VVF Ward within General Hospital

JAHUN

Jigawa State

the fistula work has been planned within this hospital consisting of 10-bed postoperative ward together with one operation theater and a 32-bed hostel just outside the hospital premises

this center should be able to cope with 250-300 operations per year

the place is fully equipped except for a operating table; if this is available the work can be implemented there

first priority

equipment
- hydraulic operating table
- operating light
- full set of instruments

manpower
- three doctors have to be trained
- eight nurses have to be trained

buildings
- rehabilitation facilities within the existing hostel

phase two

if the place is fully operating, and if there is need, it can be extended

equipment

operating table

the best is the German operating table MAQUETTE
a good alternative is the English operating table SEWARD opmaster
one has to make sure that the operating table is complete with shoulder supports and legholders and that the angle of inclination is at least 60°

operating light

it should have a combination of light bulbs with the possibility of focussing onto the operation area

set of fistula surgery instruments

the instruments have to be at least 17.5 cm long
the set consists of normal long vagina instruments with only three special fistula instruments, viz. pair of sharply curved THOREK scissors, DESCHAMPS sharp aneurysm needle and self-retaining weighted AUVARD speculum

set for spinal anesthesia

disposable 22G spinal needles, 5-ml glass syringes, sphygmomanometer, i.v. fluids with giving sets, kidney bowl

autoclave

for sterilizing operating gowns, towels and instruments

sterilizer

for sterilizing instruments

7.5 kVA diesel generator

for VVF operation theater only to run autoclave, operating light etc.

two air conditioners

per operation theater 2 air conditioners should be supplied

fistula surgery instruments set

at least 17.5 cm long instruments and of good quality

instrument		**number**
trolley for setting up instruments		two
sponge forceps for disinfecting operation area		two
self-retaining weighted AUVARD speculum		one
pair of sharply curved THOREK scissors		one
sharp DESCHAMPS aneurysm needle		one
ALLIS clamps		four
mosquito artery forceps	10 cm long/curved	ten
long slender artery forceps	20 cm long/curved	four
slender needle holder		one
robust needle holder		one
slender scalpel holder for blades No. 11		one
slender toothed tissue forceps		one
pair of slightly curved long dissecting scissors		one
pair of curved scissors to cut sutures		two
calibrated up to 25 cm uterine sound		one
set of metal dilators from H3 thru H20		one
metal bladder flushing syringe of at least 50-100 ml		one
metal kidney bowls		two
OTIS urethrotome		one

to travel 1,200 to 1,500 km per week to visit all the centers, there is only one car that gives security, safety and comfort and is also big enough to take our doctor trainees with us:

TOYOTA 4WD Landcruiser executive type
preferably with two petrol tanks

buildings

hostels

these should be considered as low care where the patients have to take care of themselves until operation; it needs at least 20-40 beds, bathroom, toilets etc.
these should **not** be converted into fistularia where the patients can live forever
costs per hostel: by contractor

rehabilitation facilities

here patients can be instructed during their waiting time and during their recovery
formal teaching rooms but also places for vocational rehabilitation such as sewing, soap making, making baskets etc
costs per rehabilitation center: by contractor

new centers

the best is to convert one ward in an existing hospital into VVF and use an existing operation room
however, right from the beginning a 20-bed hostel with rehabilitation facilities is needed, preferably outside the hospital premises

second national vvf workshop for tanzania

bugando medical center

mwanza

monday 18th thru thursday 28th of march 2002

report

kees waaldijk MD PhD

chief consultant fistula surgeon

second national vvf workshop for tanzania

bugando medical center

executive summary

after the first workshop in Dar es Salaam last year, this was the second out of series of three VVF-workshops for Tanzania under a special surgical public health program funded by the Dutch Government in combination with the Tanzanian Government and AMREF in order to:

resocialize the obstetric fistula patients from outcasts to normal members of their community and to prevent them from progressive downgrading medically, socially and mentally

it was meant to upgrade the surgical (and other) skills and the theoretical knowledge of consultant gynecologists/obstetricians and their operation theater and pre/post-operative nurses

during the practical sessions a total of 29 repairs were performed in 27 patients with excellent results since 28 healed completely including the 2 patients with urine stress incontinence; only 1 patient needs further surgery due to techical problems during the operation

by a total of 8 lectures the background of the problem was highlighted and the theo-retical knowledge of the participants updated

six of the consultants had participated in the first workshop and it was rewarding and motivating to note that their surgical skills had really improved since last year

the workshop was well organized and we were impressed by the fine organization in the operation theater and by the high-quality of the postoperative care in Bugando Medical Center

however, a workshop is a stimulation which cannot replace formal training; so now the doctors with their nurses have to come forward for further training in Babbar Ruga Hospital for a period of 2 months

second national vvf workshop for tanzania

bugando medical center

monday 18th thru thursday 28th of march 2002

day-to-day report of the workshop

monday 18th
after registration of all the participants the workshop was opened by representatives from AMREF and Bugando Medical Center
history taking, examination and selection of patients
lectures: - classification of vesicovaginal fistulas

tuesday 19th
surgery: four operations, 3 vaginal VVF-repairs and 1 vaginal RVF-repair
lectures: - review of surgery; questions and answers about the procedures
- technical aspects of VVF-surgery
wardround followed by examination and selection of incoming patients

wednesday 20th
wardround
surgery: four operations, 3 vaginal VVF-repairs and in 1 patient the left ureter was tied abdominally since ureter fistula with nonfunction ing kidney
lectures: - review of surgery; questions and answers about the procedures
- immediate management of the obstetric fistula
wardround followed by examination and selection of incoming patients

thursday 21st
wardround
surgery: five operations, 3 vaginal VVF-repairs and 1 abdomino-vesical VCVF-repair with 1 bilateral neoureterocystostomy since vesicocervicovaginal fistula with bilateral ureter fistulas
lectures: - review of surgery; questions and answers about the procedures
- postrepair urine stress incontinence and its treatment
wardround followed by examination and selection of incoming patients

friday 22nd
wardround
surgery: two operations, all vaginal VVF-repairs including an early circumferential repair
lectures: - review of surgery; questions and answers about the procedures
wardround

saturday 23rd wardround

sunday 24th wardround

monday 25th
wardround
surgery: four operations, 3 vaginal VVF-repairs and in 1 patient the vaginal approach was converted into an abdominal VCVF-repair
lectures: - review of surgery; questions and answers about the procedures
- spinal anesthesia
wardround followed by examination and selection of incoming patients

tuesday 26th
wardround
surgery: four operations, 3 vaginal VVF-repairs and 1 urethralization with anterior fasciocolposuspension
lectures: - review of surgery; questions and answers about the procedures
- pre- and postoperative care
- intraoperative instrumentation
wardround followed by examination and selection of incoming patients

wednesday 27t
wardround
surgery: three operations, 2 vaginal VVF-repairs and 1 urethralization with anterior fasciocolposuspension
lectures: - review of surgery; questions and answers about the procedures
- intra- and postoperative complications
wardround followed by examination and selection of incoming patients

thursday 28th
wardround
surgery: three operations, 2 vaginal VVF-repairs and 1 iatrogenic RVF-repair
lectures: - review of surgery; questions and answers about the procedures
handing out of the certificates to all participants
end-evaluation by participants and facilitators
further training at Babbar Ruga Hospital in KATSINA, Nigeria, was offered to all the participants provided they would find their own sponsoring
official closure

conclusion
it was a fine workshop, well organized with instructive lectures and high-quality surgery with excellent results
though there was a medium turn-up of patients for reasons out of our control, this did not interfere with the objectives of teaching and training
all participants including the facilitators expressed their satisfaction and wished to be part of the third and **?last?** workshop in PERAMIHO next year

kees waaldijk MD PhD
chief consultant fistula surgeon i/c
national vvf project nigeria
10th of april 2002

participants

consultant gynecologists		
Dr Balthazar GUMODOKA	Bugando Medical Center	MWANZA
Dr Marietta MAHENDEKA	Bugando Medical Center	MWANZA
Dr Gaudens KOMBA	Peramiho Mission Hospital	PERAMIHO
Dr Miriam M MGONJA	Muhimbili Medical Center	DAR ES SALAAM
Dr Gileard MASENGA	KCMC	MOSHI
Dr Charles H SWEKE	Selian Lutheran Hospital	ARUSHA
consultant surgeon		
Dr Fred KIRYA	Soroti Hospital	SOROTI, Uganda
doctors		
Dr Meryl NICOL	CCBRT	DAR ES SALAAM
Dr John SJ MAHONA	Designated District Hospital	MUHEZA
anesthetist		
Dr Ernestina KIMARO	Bugando Medical Center	MWANZA
operation theater nurses		
Elizabeth L BUSHIRI	Bugando Medical Center	MWANZA
John EMMANUEL	Designated District Hospital	MUHEZA
Beatrice MSHANA	Selian Lutheran Hospital	ARUSHA
Franz NDIMBO	Peramiho Mission Hospital	PERAMIHO
Petronila TARIMO	KCMC	MOSHI
postoperative nurses		
Domina KAYENZE	Bugando Medical Center	MWANZA
Hulda KINGU	Bugando Medical Center	MWANZA
Paskazia LUTELI	Bugando Medical Center	MWANZA
Hildegard MRIMA	Muhimbili Medical Center	DAR ES SALAAM
Buzzo NYANZA	CCBRT	DAR ES SALAAM

facilitators

Dr Marietta MAHENDEKA	Bugando Medical Center	MWANZA
Dr Tom RAASSEN	consultant surgeon	AMREF
kees waaldijk	consultant fistula surgeon	KATSINA

lecturers and their topics

Elizabeth L BUSHIRI	intraoperative instrumentation
Domina KAYENZE	pre- and postoperative care
Dr Ernestina KIMARO	spinal anesthesia
Dr Tom RAASSEN	review of surgery; Q & A
	technical aspects of VVF-surgery
	intra- and postoperative complications
kees waaldijk	review of surgery; Q & A
	classification of VVF
	immediate management by catheter/early closure
	urine incontinence and its treatment

surgery
surgery (**step-by-step demonstration/instruction of technique**) was performed from 9.00 to 14.00 hr followed by review of the surgical procedures, questions and answers, and by lectures
a total of **29 procedures were performed in 27 patients** all because of fistula or of fistula-related problems: 23 VVF-repairs, 2 urethralizations with anterior fasciocolpo-suspension, 2 RVF-repairs, 1 bilateral ureter reimplantation and 1 ureter tying
the facilitators demonstrated their technique(s) in 15 operations whilst the other 14 operations were performed by the participants under close supervisiona new, innovative and highly promising technique for postrepair stress incontinece, viz. urethralization with anterior fasciocolposuspension, was demonstrated in 2 patients resulting in complete cure

anesthesia
spinal anesthesia is the anesthesia of choice; only the 4 abdominal and 2 vaginal operations were performed under general anesthesia whilst the remaining 23 operations were performed under spinal anesthesia

some epidemiologic data
out of the 27 patients, a majority of 25 patients had an obstetric fistula and 2 patients had a posthysterectomy fistula
interestingly, these patients developed their fistula **far later in life** than in Northern Nigeria demonstrating the fact that early marriage/pregnancy has **nothing** to do with the obstetric fistula
in a large proportion (over 80%) of the patients a cesarean section (hysterectomy) had been performed for obstructed labor
the duration of leakage varied from only 28 days to 22 yr

venue
Bugando Medical Center for the practical sessions and theoretic lectures

actual time of workshop
9 days of roughly 9-10 hours making a total of 85 hours without traveling

sponsors

AMREF	DAR ES SALAAM
Netherlands Embassy	DAR ES SALAAM
SK_Foundation	Holland
TTT_Foundation	Holland

special thanks to
Dr Marietta MAHENDEKA for her smooth organization, the management of Bugando Medical Center for their interest and Dr Balthazar GUMODOKA with all of his staff for their excellent help and support

Kano State VVF Workshop

Laure Fistula Center

Murtala Muhammad Specialist Hospital

KANO

from monday 10th thru friday 14th of june 2002

report

kees waaldijk MD PhD

chief consultant fistula surgeon

Kano State VVF workshop in Laure Fistula Center

Murtala Muhammad Specialist Hospital

KANO

monday 10th thru friday 14th of june 2002

report

summary
this was the fourth of a series of State VVF-workshops designed for a relatively small group of professionals all in order to raise interest and to upgrade the surgical (and other) skills and the theoretical knowledge of (senior) registrars in obstetrics/gynecology and perioperative nurses and other people involved in the obstetric fistula care
in this 5-day workshop a total of 25 persons participated; this was more than planned but we had to take in more persons under pressure considering the importance of Laure Fistula Center and Kano State
it received adequate publicity as it was opened by the honorable commissioner for health of Kano State with full press coverage
during the practical sessions a total of 18 operations were performed in 17 patients to demonstrate and to practice the basic surgical principles and a catheter was inserted in another patient with postpartum atonic bladder
by a questionnaire for self-assessment and by a total of eight lectures the theoretical knowledge of the participants was tested and updated
the main observation by the participants was that 4-5 days is too short for this kind of workshop
at the end a communiqué was issued

day-to-day report of workshop

Monday 10th
opening ceremony
official opening by Honorable Commissioner for Health
registration of the participants
questionaire for self-assessment at beginning of workshop
display of instruments
history taking, examination and selection of patients
lectures: classification of vesicovaginal fistulas; incidence and prevention of the obstetric fistula

Tuesday 11th
surgery: five operations, all VVF-repair, one type I, two type IIAa, one type IIBa as first stage and one type IIBb as first stage, and one catheter treatment for postpartum atonic bladder
review of surgery; Q & A
lectures: the immediate management of the obstetric fistula

Wednesday 12th

surgery: five operations, all VVF-repair, one type IIAa, one type IIBa, two type IIBb and one postrepair stress incontinence
review of surgery; Q & A

lectures: perioperative management

Thursday 13th

surgery: five VVF-operations, all VVF-repair, 4 type IIAa and one postrepair stress incontinence with small fistula
review of surgery; Q & A

lectures: intra- and postoperative complications; spinal anesthesia

Friday 14th

surgery: three operations, one VVF-repair type IIAa with ureter implantation at R and one RVF-repair
review of surgery; Q & A

lectures: the continence mechanism in the female; urethralization and anterior fasciocolposuspension in postrepair urine stress incontinence

full discussion of questionaire for self-assessment at end of workshop
evaluation of the workshop by participants and facilitators
closing ceremony
official closure by chief medical director of Murtala Muhamnmad Specialist Hospital who handed out the certificates to all participants

conclusion

since Kano State Government becomes more and more interested and committed to the obstetric fistula, it was high time for this workshop, especially as this year we shall see some 1,000-1,500 new patients in the state
most doctors had already been trained and for them it was a refresher course with updating of their skills and knowledge and the latest developments
we were happy to have included nurses from isolation ward, eclamptic ward and antenatal ward so they can see what has happened to their patients and what is being done for them
it is a reminder to all of us that the **obstetric fistula is a major public health problem still on the rise**

Kees WAALDIJK, MD PhD
chief consultant fistula surgeon
National VVF Project for Nigeria

participants

doctors/surgeons/gynecologists		
Dr Hauwa ABDULLAHI	Aminu Kano Teaching Hospital	KANO
Dr Idris ABUBAKAR	Aminu Kano Teaching Hospital	KANO
Dr Kabir ABUBAKAR	Murtala Muhammad Spec Hospital	KANO
Dr Grace EZENWAFOR	Ilorin University Teaching Hosp	ILORIN
Dr Hamza MUKHTAR	Murtala Muhammad Spec Hospital	KANO
Dr Yakubu A TIJJANI	Wudil General Hospital	WUDIL
nurses		
Bilkisu Sule DARMA	Murtala Muhammad Spec Hospital	KANO
Binta Sanusi GWARZO		
Binta HALLADU	Wudil General Hospital	WUDIL
Zainab Ibrahim	Murtala Muhammad Spec Hospital	KANO
Ummah Abubakar ISAH	Laure Fistula operation theater	KANO
Zainab MUHAMMAD	Murtala Muhammad Spec Hospital	KANO
Kabir K LAWAL	Babbar Ruga Hospital	KATSINA
Binta MUKHTAR	Murtala Muhammad Spec Hospital	KANO
Maryam UMAR	state VVF-coordinator	KANO
attendants		
Umma ABDULLAHI	Laure Fistula operation theater	KANO
Kaltume GARBA	Laure Fistula operation theater	KANO
Shu'aibu SANI	Laure Fistula operation theater	KANO
social workers		
Abdulaziz SUNUSI	Kwalli VVF Hostel	KANO
Musa ISA	Kwalli VVF Hostel	KANO
nongovernmental organization		
Amina SAMBO	GHON	KANO
logistics		
Abdullahi HARUNA	Babbar Ruga Hospital	KATSINA
facilitators		
Hadiza MOHAMMED	Laure Fistula theater	KANO
Dr Amir Imam YOLA	Muhammed Abdullahi Wase Spec Hosp	KANO
Kees WAALDIJK, MD PhD	Nat VVF-Project for Nigeria	KATSINA

lecturers and their topics

Hadiza MOHAMMED	perioperative management
Dr Amir Imam YOLA	intra_/postoperative complications
Dr Tukur Ado JIDO	incidence/prevention of the obstetric fistula
Dr Idris S ABUBAKAR	spinal anesthesia
kees waaldijk MD PhD	classification/operation techniques
	immediate management/early closure
	continence mechanism in the female
	urethralization/postrepair stress incontinence

communiqué

Dr Hauwa MOHAMMED
Dr Tukur Ado JIDO
Dr Amir Imam YOLA

multiple choice questionaire
at the beginning of the workshop and the same at the end for **self-assessment** of the participants; full discussion at end of workshop

surgery
on Tuesday, Wednesday, Thursday and Friday surgery (**step-by-step demonstration of technique**) was performed from 7.30 to 14.00 hr after which the venue was changed for lectures and review of the surgical procedures
a total of **18 operations were performed**, all because of fistula or fistula related problems like postoperative stress incontinence; whilst another patient was treated by catheter only

venue
Laure Fistula Center of Murtala Muhammad Specialist Hospital for practical sessions and for theoretical lectures

actual time of workshop
5 days of roughly 8 hours making a total of 40 hours + 5 hours traveling

sponsors

SK_Foundation	Holland
TTT_Foundation	Holland

special thanks to
Dr Immam AMIR and Hadiza MOHAMMED for their smooth organization and to the Management of Murtala Muhammad Specialist Hospital and Kano State Ministry of Health for their continuing support

first (international) VVF workshop for Burkina Faso

Centre Hospitalier Régional

DORI

from 26th of october thru 2nd of november 2002

report

kees waaldijk MD PhD

chief consultant fistula surgeon

first VVF workshop for Burkina Faso

executive summary

this was the first VVF-workshop for Burkina Faso designed for a relatively small group of professionals all in order to raise interest and to upgrade the surgical (and other) skills and the theoretical knowledge of consultant gynecologists, doctors, perioperative/anesthetic nurses, midwives and other people involved in the obstetric (fistula) care in Burkina Faso

there were a **total of thirty-two participants** from **5 different countries** in **2 different continents**, viz Burkina Faso, Germany, Holland, Nigeria and République du Niger

we were very proud of the fact that 7 highly qualified gynecologists/lecturers from 5 University Teaching Hospitals in Germany and Holland attended to see with their own eyes **the complex trauma of the obstetric fistula** and to witness what can be done under "primitive" conditions; normally people from Africa travel to Europe for upgrading their knowledge; hopefully, this may be the start of more interest in the obstetric fistula which is highly prevalent in Africa **with some 1.5 to 2 million patients**

during the practical sessions a **total of 21 operations/procedures were performed in 17 patients** to demonstrate the basic surgical principles: 14 VVF-repairs, 3 RVF-repairs with(out) sphincter ani reconstruction, 2 urethralization/anterior fascio_colposuspension with(out) fistula repair, 1 vagina reconstruction (after VVF/RVF-repair) and 1 dilatation/catheter treatment for UV-stricture with atonic bladder

we were able to demonstrate catheter treatment, simple VVF-repair, circumferential UVVF-repair, ureter catheterization, RVF-repair, primary suturing of RVF, sphincter ani/perineal body reconstruction and vaginoplasty

we could show that all VVF and RVF surgery can be done under spinal anesthesia in the exaggerated lithotomy position by the vagina route

we could also demonstrate our latest development for the major complication in VVF surgery, viz (post)repair stress incontinence: urethralization and anterior fascio_colposuspension which has highly promising theoretical and practical potentials

by a questionnaire for self-assessment and by a total of four lectures the theoretical knowledge of the participants was tested and updated

since it took us four full days and 40 hours to travel by road from Katsina to Dori and back a report of this cruel 2,400-km journey is given as well

first VVF workshop for Burkina Faso

Centre Hospitalier Régional

DORI

26th of October thru 2nd of November 2002

report

introduction

during the year 2000 the consultant fistula surgeon Dr Kees was invited by Dr J³rgen WACKER, MD PhD, for a lecture about VVF in Germany; however, that would have made little sense as there are no obstetric fistulas in Europe

therefore it was decided to organize a VVF workshop for Burkina Faso where the obstetric fistula is as prevalent as in the rest of (West) Africa

first, Dr Yacouba ZANRÉ attended a 3-weeks' training and then the workshop was planned for October 2001 but had to be postponed for the obvious reason

as venue the newly built Centre Hospitalier RÚgional de DORI was selected since the organizer Dr WACKER was familiar with this town and hospital

the intention was a) to introduce the participants to the **complex trauma of the obstetric fistula** and then b) to demonstrate the **noble art of its (surgical) management** and c) to **stimulate interest** for further formal training of doctors and nurses from Burkina Faso in order **to establish a VVF-service for Burkina Faso** since it are the Burkinese people themselves who have to take care of their own health problems under their own conditions and within their own financial and other resources

also a selected group of interested consultant gynecologists/lecturers/students/midwives from Europe participated since they wanted to know more about the obstetric fistula

for a smooth organization of the workshop, Dr WACKER had sent out his team some time earlier to select VVF-patients from DORI and surrounding villages

to "save time" the team from Nigeria/République du Niger "traveled" by road from Katsina to Dori and back

since the consultant fistula surgeon had committed himself and the UN invitation came late, he could not attend the very important meeting **initiative against fistula** with the United Nations Fund for Population Activities in ADDIS ABABA in Ethiopia for which he had to send his deputy Dr Abdulrasheed YUSUF to represent him and the National VVF Project

traveling from KATSINA to DORI

saturday 26th
having loaded the old UNDP car, Peugeot stationwagon with 260,000 km on the meter, the 4-man-strong team from Nigeria/Niger left KATSINA at around 7.30 hr in the morning; at the border in JIBIYA/DAN_ISSA the République of Niger was entered where we continued via MARADI where we had our breakfast at the roadside, a bad road for some 60 km from pothole to pothole up to MADAOUA, via GALMI and BIRNI N'KONNI to DOGONDOUTCHI where we had lunch, after DOSSO the car started to shake but we could not locate the problem until the back tyre blow out (internal wreckage due to the potholes!!) and with the spare wheel mounted we arrived in NIAMEY for the night at 19.00 hr; the hotel was full but we managed to get another 11.5 hours in the car for 750 km!
the car was driven alternately by Kabir, Abdullahi and Kees; so who caused the blow-out?
our meeting with officials to discuss about a VVF-service in NIAMEY failed since no one turned up though we had trained a doctor from there recently

sunday 27th
at 7.00 hr we were up and to the mai shai for breakfast where Abdullahi got annoyed as there were no onions for his egg and he had to pay for the sugar in his coffee; then we bought a new tyre (!Belgian! type as the new one was too expensive) and before we started our journey at around 10.00 hr we paid a visit to the VVF ward in NIAMEY where some 250-300 patients are on the waiting list since no repair has been performed during the last 5 years
we heard all kinds of stories that the road up to DORI could only be managed by a 4-wheel driven car, but being a combination of Nigerians/Nigerien/ Dutcherian we wanted to see for ourselves and give it a try; Dr Lucien got hold of one of his in-laws willing to act as our guide up to TERA where we, during our lunch, were making an effort to either charter a truck or arrange for another guide up to DORI since we did not know the road; but after long deliberations we were told that at this time of the year any vehicle could pass and that the road was showing itself
per ferry over the river NIGER, a new experience for Kabir and Abullahi who had never been on a boat, and so we entered **no-man's land** without a guide, without a map and even without a road: only sand, scrub bush and few tracks with a big hump in the middle; however, some tracks were more "visible" and looked "better" than others but the sand was everywhere the same and many times we thought we got stuck in the middle of nowhere; we could not communicate with anybody since the 2 persons we saw on this "jouney" did not understand us and we did not understand them; we all felt like smugglers but we had nothing to smuggle; having covered some 40 km in 3 hours! we all of a sudden saw a hut with a pole and were happy to meet the borderpost where to our surprise we were told we were already in Burkina Faso; though they offered us water which we took happily since we had !none!, they wanted to see the car papers which we did not have since it is a UNDP vehicle; also this hurdle we passed but were told to show something on our way back
Abdullahi refused to drive so Kees took over from Kabir for the last 40 km and the low flying thru, over and under the sand started, the tracks became more, and more confusing, the car started to bounce, the luggage started to bounce and we started to bounce as well (poor Dr Lucien had to take voltaren for 2 days because of backache!) but we arrived "safely" in DORI after some 70-80 minutes instead of the 3 hours they predicted at the border
everything covered by sand, no distinction between car, luggage and/or passenger, we arrived at the guesthouse around 19.00 hr, local time 18.00 hr; we thanked Allah for having protected and guided us safely and we met with the other participants and Kees with his wife coming from Holland by air

Kabir and Kees made a deal that Abdullahi had to drive back all the way and the real workshop started 9 hours in the car to cover some 300 km!

DORI turned out to be a small town of only 25,000 inhabitants but with excellent infrastructure since we did not experience a single power break in the electricity or in the water supply during our 4-day stay; however, no tarred roads

the actual workshop

monday 28th

opening: after the opening ceremony by the mayor of DORI, the director of the CHR hospital, the military administrator and Dr Jürgen WACKER, we had a full tour of the beautifull Centre Hospitalier Régional, well built and well equipped

selection: having overcome the initial minor problems which are inherent to every workshop, e.g. an afternoon break from 14-16.00 hr, we could start with the examination/selection of the 19 patients at around 16.00 hr

we could not freely communicate with the patients since they were not speaking French but only their tribal language so we skipped our normal history taking and continued straight away with the systematic examination not only of the fistula but also of possible peroneal nerve trauma

we could locate the fistula, even on a normal examination table, immediately in 15 patients, decided to perform a dye test with gentian violet on the operating table the next day in 4 patients, and demonstrated the grading of peroneal nerve motor trauma resulting in drop foot according to the **M**edical **R**esearch **C**ouncil from 0-5, where

5 = normal, 4 = full movement but slight loss of muscle strength, 3 = half-range movement if the gravity is excluded, 2 = dorsiflexion of the toe(s), 1 = only a muscle twitch and 0 = no function whatsoever

tuesday 29th

surgery: we started 8.00 hr sharp with spinal anesthesia in the first patient and performed 7 operations in 6 patients, viz catheterization of the L ureter and UVVF-repair, circumferential UVVF-repair as first stage, simple UVVF-repair, simple UVVF-repair, extensive UVVF-repair with rectum closure/sphincter ani_perineal body reconstruction, and UVVF-repair as first stage

afterwards the dye test with gv was performed: 2 patients had a fistula, 1 patient had UV-stricture with overflow incontinence and 1 patient turned out to be a bed wetter

in the patient with UV-stricture, a gradual dilatation was done and a FOLEY Ch 18 catheter inserted

Q&A were asked/given during the 8 procedures and/or immediately afterwards and we finished at around 15.00 hr

wardround: all the patients were doing fine

lectures: due to some misunderstanding about the time this was left

wednesday 30th

wardround: all the patients were doing fine

surgery: from 8.00 hr till 15.30 hr 6 operations were performed in 5 patients, viz difficult bilateral ureter catheterization and circumferential UVVF-repair, closure/urethralization/fasciocolposuspension, catheterization L ureter and CS_VCVF-repair, urethralization/fasciocolposuspension of stress incontinence, and bilateral ureter catheterization and UVVF-repair with primary suturing of RVF

NB one patient collapsed in the waiting area before operation and was excluded from surgery during the workshop

lectures: Q&A during and immediately after the procedures in French, English, German and Amsterdam slang
classification of VVF with consequences for operation/prognosis
classification of RVF with consequences for operation only
urine continence mechanism in the female
urine incontinence in all its forms

wardround: all the patients were doing fine

thursday 31st

wardround: all the patients were doing fine

surgery: from 8.00 hr till 15.00 hr 7 operations were performed in 5 patients, viz simple VVF-repair in patient with 4-mth pregnancy, bilateral ureter catheterization and CS_VCVUVF-repair, CS-VCVF-repair, VCVF-repair, and a circumferential fixation of urethra/ bladder repair/RVF-repair/vagina reconstruction in 1 patient

wardround: all the patients were doing fine

this was the end of the workshop for the Nigerian/Nigerien/Dutcherian team

closing: we were all invited for dinner by Dr J³rgen WACKER and his wife Renate where lamb was served with rice and fish, a German song was presented by the Germans, the mayor held his final remarks, we heard some wisdom but could not understand it, we were all presented with a témoignage, and the ROTTERDAM team presented a "tableau vivant" after which the artist Kabir was given a book about Holland and the other members "drop"

traveling back from DORI to KATSINA

friday 1st

having loaded our car again, we left exactly at 7.00 hr; since we had decided to take another route because of the terrible tracks and the problem at the border, we took a guide to find the junction between DORI/OUGADOUGOU to FADA then we were on our own; Abdullahi had to drive, the road was not that bad but all of a sudden we ended up in the ditch since the driver lost control of the car trying to evade a goat and coming to stillstand against a big stone; nothing serious happened except that some 1,000 m farther we had a flat tyre; the crick was a bit rusty/sandy so heavy work; we only saw and inhaled dust until we arrived in FADA where we had our brunch and got our tyre vulcanized; then for the first time we entered a tarred road up to the border which we crossed with the usual minor problems; again it was the car but we were able to produce a "laissez passer" where the plate number was recorded; from the border at KANTCHARI we were again on a laterite road including potholes but we managed to arrive safely in NIAMEY at 17.00 hr and our hotel was full and we went to another; even after 5x shower with soap/ shampoo we were not clean 9 hours in the car for 575 km!
at night we had a discussion with members of a NGO "interested" in the VVF problem but they were not serious: the usual, we have become experts

saturday 2nd

having the car washed inside and outside including our luggage, we left the hotel at 8,00 hr since most of us wanted to have some rest; up to the mai shai where we had coffee, French bread with sardines in oil or even a full meal with fresh fried fish, sauce and tuwo; then we were ready to go on the last leg on the same road we had come but we could not make real progress, we could not get food (restaurants closed) except for some rotten suya that everybody in the car refused, until at last we came to MARADI at around 18. 00 hr where we dropped Dr Lucien in the car park on his way to ZINDER, another 250 km!, and we proceeded to the borderpost in DAN_ISSA/JIBIYA where we had real problems to enter Nigeria; in the dark Kabir drove home where we arrived at 19.30 hr 11.5 hours in the car for 750 km!

conclusion

it was a fine workshop where we finished what we had come for: all the VVF patients were operated upon except for the one who collapsed

we were able to demonstrate the complex trauma of the obstetric fistula and the basics of how to handle it

some practical and theoretical aspects were highlighted but since the time was limited not all could be shown

since a workshop is only a stimulation and cannot replace formal training, we hope to train some doctors and many nurses from Burkina Faso very soon as a priority for starting a VVF service in the country

the participants, the facilitators, the organizer and the patients were all happy

however, the strain of those 8 days was such that none of us is not willing to do it again

kees waaldijk MD PhD
chief consultant surgeon
National VVF-Project

participants

consultant gynecologists			
Dr Angelika BARTH, MD		FRANKFURT	Germany
Dr Clemens BARTZ, MD		KÖLN	Germany
Dr Wouter HUISMAN, MD PhD		ROTTERDAM	Holland
Dr Djangnikpo LUCIEN		ZINDER	Rép du Niger
Dr Tom SCHNEIDER, MD PhD		ROTTERDAM	Holland
Dr Bettina UTZ, MD		KUPPENHEIM	Germany
Dr J³rgen WACKER, MD PhD		BRUCHSAL	Germany
Dr Yacouba Z ZANRÈ		OUGADOUGOU	Burkina Faso
consultant surgeon			
Dr Kees, MD PhD		KATSINA	Nigeria
university lecturer/coordinator			
Mrs Norma van ZELST-WATERVAL		ROTTERAM	Holland
general doctors			
Dr Mahamadi CISSÈ	MaternitÚ CHR	DORI	Burkina Faso
Dr Yissou DAO	Surgery CHR	DORI	Burkina Faso
matrons			
Mrs Anata OUÈDRAOGO	Maternité CHR	DORI	Burkina Faso
Mrs Kadidiatou DICKO-ROUAMBA	Maternité CHR	DORI	Burkina Faso
Mrs Hadiatou Alou DICKO-DIALLO	Maternité CHR	DORI	Burkina Faso
Mrs Salamatou TRAORÈ	DIMOL	NIAMEY	Niger
theater nurses			
Mrs FÚlicien TOUGOUMA	op theater CHR	DORI	Burkina Faso
Mr Djibey MAIGA	op theater CHR	DORI	Burkina Faso
Mrs HervÚ OUÈDRAOGO	op theater CHR	DORI	Burkina Faso
Mr Moussa OUÈDRAOGO	op theater CHR	DORI	Burkina Faso
Mr Marcel ZON	op theater CHR	DORI	Burkina Faso
Mrs Kako DOMBOUÈ	op theater CHR	DORI	Burkina Faso
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Mr Albert T KOBIÉ	op theater CHR	DORI	Burkina Faso
Mrs Rouketou SAWADOGO	op theater CHR	DORI	Burkina Faso
Mrs Brahima TRAORE	op theater CHR	DORI	Burkina Faso
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Ms Sabine GRESSER	BRUCHSAL	Germany	
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Dr Djangnikpo LUCIEN	Maternité	ZINDER	Niger
Dr Kees, MD PhD	National VVF Project		Nigeria
Dr J³rgen WACKER, MD PhD	Univ Hosp	BRUCHSAL	Germany
Dr Yacouba ZANRÉ	Univ Hosp	OUGADOUGOU	Burkina Faso
logistics			
Mr Sebastian KAMMERER	med student	WIESLOCH	Germany
Mr Abdullahi HARUNA	B/Ruga Hosp	KATSINA	Nigeria

surgery

on Tuesday, Wednesday and Thursday surgery (**step-by-step demonstration of technique**) was performed from 8.00 to 15.30 hr after which the venue was changed for lectures and review of the surgical procedures

a total of **20 operations were performed in 16 patients whilst 1 patient was treated by catheter after dilatation of UV-stricture**, all because of fistula or fistula related problems like postoperative stress incontinence

things demonstrated were:

systematic examination of the obstetric fistula
grading of drop foot according to MRC scale, from 0 to 5
the importance of dye testing by gentian violet
the importance of pre- and postoperative high oral fluid intake
spinal anesthesia as the **anesthesia of choice**
exaggerated lithotomy position as the **position of choice**
the vagina as the access **route of choice**
vaginal surgery as a **one-man job**
two instruments inside the vagina is a crowd
liberal use of episiotomy(ies) to improve access
THOREK scissors as the only special instrument
sharp DESCHAMPS aneurysm needle for advanced fistula surgery
basic surgical principles
meticulous closure of the bladder
only adaptation/half-open closure of the anterior vagina wall
simple VVF-repair
minute fistula repair needing large incision/excision of scar tissue
complicated VVF-repair
circumferential repair by end-to-end vesicourethrostomy
CS_vesicocervicovaginal fistula repair
ureter catheterization
highly complicated VVF-repair
VVF-repair in a 4-mth pregnant patient with **no** blood loss
urethralization/anterior fasciocolposuspension for (postrepair) urine stress incontinence
dilatation of UV-stricture
primary suturing of small RVF
rectum closure with sphincter ani/perineal body reconstruction
simple RVF-repair
the solution to pollution is dilution
ba hanya = no road
vagina reconstruction by skin rotation flap in VVF/RVF with ba hanya

though many things could be demonstrated, the variety of obstructed labor resulting in the obstetric fistula and its treatment is such that the workshop was too short to demonstrate all, e.g. various types of urethra reconstruction with(out) various types of flaps etc etc

however, the **best advice** is to **insert a FOLEY Ch 18 catheter** for at least 4 weeks **immediately when urine leakage starts after delivery**; this will cure some 15-20% of the patients if they **drink at least 6-8 liters per day**

lecturer and topics

Dr Kees	Q&A about the surgical procedures
	classification of VVF with consequences for operation/prognosis
	classification of RVF with consequences for operation only
	urine continence mechanism in the female
	urine incontinence in all its forms

multiple choice questionaire

at the beginning of the workshop and the same at the end for **self-assessment** of the participants

venue

Centre Hospitalier RÚgional de Dori for the examination/selection/surgery
guest house for discussions/theoretical lectures

actual time of workshop

4 days of roughly 8 hours making a total of 32 hours + 40 hours traveling

sponsors

major sponsor

Rotary Club	BRUCHSAL	Germany
additional sponsoring		
SK_Foundation	AMSTERAM	Holland
TTT_Foundation	TIEL	Holland

thanks to

all the staff of Centre Hospitalier Régional DORI for their cooperation and dedication; and especially Mrs Aminata OUÉDRAOGO
Dr Yacouba ZANRÈ for the regional organization
Dr Djangnikpo LUCIEN for his contribution
all the participants for their interest in the obstetric fistula

special thanks to

Dr Jürgen WACKER and his wife Renate for taking fine care of all of us and of the overall organization

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