national vvf project nigeria

evaluation report XI

first half 1997

reprint

Babbar Ruga Fistula Hospital
KATSINA

and

Laure Fistula Center
KANO

and

Jummai Fistula Center
SOKOTO

and

Special VVF Center
BIRNIN KEBBI

and

Centre Hospitalier Departemental
MARADI

kees waaldijk MD PhD
chief consultant surgeon

reprint

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paris

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VVF-projects

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kees waaldijk

XIth evaluation report
VVF-projects B_KEBBI/HADEJIA/KANO/KATSINA/SOKOTO/MARADI

introduction
Since another 5-year contract has been entered with the Federal Ministry of Health, this is the first report under the new contract period 1997-2002.

There is a dual purpose to operate VVF patients and to train the indigenous Nigerian doctors in the noble art of VVF management.

Since prevention seems to be a utopia and the prevalence will increase in the (near) future, we have to make sure the expertise becomes and remains available where it is needed.

The action radius of a center is 100-120 km, and 90% of the patients report from within this area.

Therefore we are continuously expanding our **public health VVF surgery** programme in an effort to reach as many patients as possible and to bring the service nearer to the patients.

expansion
We extended our service to BIRNIN KEBBI in Kebbi State where last year Dr Hassan WARA started a VVF Center.

As well Dr Said AHMED who completed his specialist training in obstetric and gynecology in Russia started a VVF-center in HADEJIA in Jigawa State.

long-term objectives
To establish a lasting VVF-service with ultimately the total eradication of the obstetric fistula.

lasting VVF-service

In KANO and KATSINA a VVF-repair service with training of doctors and nurses has been established. In SOKOTO we are consolidating the service whilst in B/KEBBI and HADEJIA we just started.

Dr Ann WARD is doing a fine job in Akwa Ibom State; the same applies to Dr Jonathan KARSHIMA who is working in Plateau State.

This means that in 7 of the 37 states of the Federation of Nigeria a functioning obstetric fistula service is available.

As part of a bilateral agreement also a VVF-repair service has been started in neighboring Republiqe du Niger in MARADI.

prevention

There is no relation to tribe, religion, culture, early marriage or anything else, except for **early intervention by CS within 3 hours**.

All the people speaking about banning of early marriage have to realize the lesson learned from history: The obstetric fistula has disappered from the industrialized world only by **the establishment of a network of functioning obstetric units, and not by banning early marriage**.

Therefore we should not waste our efforts on a political item, but should concentrate on doing the only right thing, viz. setting up proper antenatal and obstetric care, i.e. **a network of 75,000 functioning obstetric clinics thoughout Africa!!**

short-term objectives
To further upgrade/develop the Babbar Ruga Fistula Hospital in KATSINA and Laure Fistula Center in KANO into (inter)national VVF-training centers, and to start new VVF-repair centers.

KATSINA
facilities
The **fistula unit** consists of a 38-bed postoperative ward, a 37-bed preoperative/catheter ward, a total of 150 beds in 3 hostels and a small occupational therapy building.
Under a grant from the SK-Foundation a guesthouse for the Nigerian trainees has been constructed. For furnishing Katsina State has been approached.

capacity
The theoretic capacity of 1,000 operations a year is more than sufficient. The **backlog** of patients has been **cleared**, and new patients are attended to immediately.

international training center:
We are completely set and fit now to train different cadres of doctors/nurses from all over Africa.

service
The fistula surgery/training service was started in 1984 and is now well established.

KANO
facilities
Laure Fistula Center is part of Murtala Muhammad Specialist Hospital, the largest hospital in Kano State.
The **fistula unit** consists of 40 postoperative beds. The preoperative hostel of 50 beds is situated 2 km away outside the hospital in KANO town; it is completely neglected and needs a total refurbishing.
As NEPA is unreliable a small 7.5 kVA standby generator for the theater is needed to ensure that we can operate at all times.

capacity
The theoretic capacity of 1,000 operations a year is more than sufficient. The **backlog** of patients has been **cleared**, and new patients are attended to immediately.

service
The fistula surgery/training service was started in 1990 and is now well established.

SOKOTO
facilities
Jummai Abdulkarim Fistula Center is part of the Specialist Hospital SOKOTO. In theory all facilities are available.
The **fistula complex** consists of a 20-bed postoperative ward, a 10-bed hostel and two beautiful operation theaters.
However, the equipment of the operation theater is below any standard, and the staff needs proper training.
A new center is under construction and on completion the VVF-service will be shifted to this place.

capacity
The theoretic capacity of 400-500 operations a year seems to be sufficient.

service
The service was started in 1994 and needs upgrading.

<u>BIRNIN KEBBI</u>
facilities
A new VVF-Center has been constructed but it needs upgrading especially in terms of equipment.

capacity
The theoretic capacity seems to be sufficient.

service
It is too early to say anything.

In all centers B/KEBBI and KANO and KATSINA and SOKOTO there is an urgent need for one hydraulic high-quality operating table; so <u>four</u> in total

<u>HADEJIA</u>
Dr Said AHMED, an experienced fistula surgeon, started a VVF-service but we have not had the opportunity yet to visit the place.

<u>ZARIA</u>
Arrangements had been made to start a VVF-service in Kofar Gayan Hospital in the beginning of 1997 in ZARIA in Kaduna State.
However, due to political problems we have to postpone it till next year.

<u>GUSAU</u>
As soon as Zamfara State is stabilized we shall start discussions to start our programme there since 3 trained doctors are already available. It will be sometime during 1998.

Republique du Niger
<u>MARADI</u>
The gynecologic department within the Centre Departemental Hospitalier in MARADI is being utilized for the fistula work.
The service was started in January 1996, and we are satisfied with the output in terms of surgery and training.
Every fortnight on Friday the surgical team leaves early in the morning and returns in the evening at KATSINA.
Two nurses were trained, and the surgeon attended a 2-week training course in KATSINA.
However, there was a fire in the gynecologic ward, and the political situation is unstable with repeated strikes.

further expansion throughout Africa
It would be a pity if all the expertise gained sofar in (Northern) Nigeria would not be made available to the rest of Africa.
Republique du Niger seems to be a good starting point especially since it is a francophone country.

The real problem is: which organization/foundation/government is able and willing to finance an all-Africa obstetric fistula project??

activities

postgraduate training (see Annex I)

general doctors/senior registrars/surgeons/visiting consultants
Sofar, a total of **85 doctors** from all over Nigeria as well as from abroad have been trained or attended our programmes.

surgeons in the 6 centers
It is only by their dedicated efforts that we are able to provide a proper service.

(theater) nurses/midwives
A total of **66** nurses from all over the Federation of Nigeria attended and completed the course(s); as well as **2** nurses from Republique du Niger.

surgery (see Annex II)
During the first half of 1997 a total of 568 VVF/RVF-repairs have been performed in the centers.
Since the beginning of the project in 1984, a **grand total of 8,805 VVF/RVF-repairs and related operations** have been performed.

research

generally
Almost all problems related to VVF-surgery have been solved except postoperative urge incontinence due to detrusor instability.
The intention has been and still is: **make complicated things simple, effective, feasible, safe and payable under primitive circumstances!**
However, development is a continuing process so we have to keep our eyes on the future never looking back but trying to improve upon what we have sofar achieved.

VVF-surgery
immediate surgical management; by means of catheter and/or early closure
Our **standard** treatment for patients with a fistula duration of less than 3 months can be recommended to any fistula surgeon.
Already some **1,050 patients** have been treated with a **success rate of almost 95%!**
Immediate bladder catheterization with ample fluid intake is a must, and 397 patients have been cured by this management only.

external funds

It is only due to a grant from the SK Foundation in combination with the TTT Foundation that we are able to travel from KATSINA to KANO/SOKOTO/MARADI/B_KEBBI and back to KATSINA and that we can provide for things like spinal anesthetic agents, suturing material, needles, scalpels, gauze etc. Also the Wereldwinkel in MAASTRICHT is helping out.
The SK Foundation has even extended their help to a more structural aid.

conclusion

There is a slow and steady progress of our VVF programme in terms of surgery, training and centers. However, we still have to go a long way.

kees waaldijk MD PhD
chief consultant surgeon
Babbar Ruga Fistula Hospital
P.O.Box 5
KATSINA

annex I
list of trainees

present surgeons

Dr Hassan WARA	Fistula Center, B/KEBBI
Dr Said AHMED	General Hospital, HADEJIA
Dr Immam AMIR	Laure Fistula Center, KANO
Dr Idris HALLIRU	Babbar Ruga Fistula Hospital, KATSINA
none	Jummai Fistula Center, SOKOTO
none	Centre Departemental Hospitalier, MARADI

past surgeons

Dr Yusha'u ARMIYA'U	Babbar Ruga Fistula Hospital, KATSINA
Dr Shehu BALA	
Dr Jabir MOHAMMED	
Dr Aminu SAFANA	
Dr Isah Ibrahim SHAFI'I	
Dr Idris S ABUBAKAR	Laure Fistula Center, KANO
Dr Said AHMED	
Dr Umaru DIKKO	
Dr Iliyasu ZUBAIRU	
Dr Bello Samaila CHAFE	Jummai Fistula Center, SOKOTO

general doctors with at least 3 yr surgical experience

Dr Garba Mairiga ABDULKARIM	Borno State
Dr Umar Faruk ABDULMAJID	Katsina State
Dr Ibrahim ABDULWAHAB	Niger State
Dr Idris S. ABUBAKAR	Kano State
Dr Abdu ADO	Katsina State
Dr Mohammed I AHMAD	Jigawa State
Dr Said AHMED	Jigawa State
Dr Immam AMIR	Kano State
Dr Ebenezer APAKE	Taraba State
Dr Yusha'u ARMIYA'U	Katsina State
Dr Shehu BALA	Katsina State
Dr Aliyu BATURE	Kaduna State
Dr Ibrahim BATURE	Zamfara State
Dr Bello Samaila CHAFE	Zamfara State
Dr Umaru DIKKO	Kano State
Dr Gyang DANTONG	Plateau State
Dr Bello I DOGONDAJI	Sokoto State
Dr James O. FAGBAYI	Kwara State
Dr Abdullahi GADA	Sokoto State
Dr Gabriel HARUNA	Kaduna State
Dr Kabir Aliyu IBRAHIM	Jigawa State
Dr Saidu A. IBRAHIM	Jigawa State
Dr Halliru IDRIS	Katsina State
Dr Sa'ad IDRIS	Zamfara State
Dr Zubairu ILIYASU	Adamawa State
Dr Benedict ISHAKU	Plateau State
Dr Momoh Omuya KADIR	Kogi State
Dr Hassan LADAN	Kebbi State
Dr Sabi'u LIADI	Katsina State
Dr Ado Kado MA'ARUF	Katsina State
Dr (Mrs) Linda MAMMAN	Adamawa State
Dr Umaru Mohammed MARU	Zamfara State

Dr Bako Abubakar MOHAMMED	Bauchi State
Dr Jabir MOHAMMED	Katsina State
Dr Gamaliel Chris MONDAY	Plateau State
Dr Ibrahim MUHAMMAD	Jigawa State
Dr Dunawatuwa A.M. MUNA	Borno State
Dr Yusuf Baba ONIMISI	Kano State
Dr Yusuf SAKA	Kwara State
Dr Aminu SAFANA	Katsina State
Dr Isah Ibrahim SHAFI'I	Kebbi State
Dr Aliyu SHETTIMA	Borno State
Dr (Mrs) Yalwa USMAN	Kano State
Dr Aqsom WARIGON	Adamawa State
Dr Munkaila YUSUF	Kano State

senior registrars in obstetrics/gynecology

Dr Yomi AJAYI	IBADAN
Dr Francis AMAECHI	ENUGU
Dr Nosa AMIENGHEME	ILE-IFE
Dr Lydia AUDU	SOKOTO
Dr Ini ENANG	ZARIA
Dr Deborah HAGGAI	KADUNA
Dr Nestor INIMGBA	PORTHARCOURT
Dr Jesse Yafi OBED	MAIDUGURI
Dr Nworah OBIECHINA	ENUGU
Dr John OKOYE	ENUGU
Dr Benneth ONWUZURIKE	ENUGU
Dr Mansur Suleiman SADIQ	KANO
Dr Dapo SOTILOYE	ILORIN
Dr Emmanuel UDOEYOP	JOS
Dr (Mrs) Marhyya ZAYYAN	KADUNA

senior registrars in anesthesia

Dr Saidu BABAYO	Bauchi State
Dr Abdulmummuni IBRAHIM	Katsina State

visiting consultants

Prof Dr Shafiq AHMAD	PESHAWAR, Pakistan
Dr Said AHMED	HADEJIA, Nigeria
Dr Frits DRIESSEN	NIJMEGEN, Holland
Prof Dr Jelte DE HAAN	MAASTRICHT, Holland
Dr Vivian HIRDMAN	STOCKHOLM, Sweden
Dr Jonathan KARSHIMA	JOS, Nigeria
Dr Djangnikpo LUCIEN	MARADI, Niger
Prof Dr Oladosu OJENGBEDE	IBADAN, Nigeria
Dr Thomas J.I.P. RAASSEN	NAIROBI, Kenya
Dr Ruben A. ROSTAN	MASANGA, Sierra Leone
Dr Ulrich WENDEL	BESIGHEIM, Germany

medical anthropologist

Sandra BOER	AMSTERDAM, Holland

physiotherapist

Garba M FAGGE	Kano State

nurses/midwives

Mohammed B A ADAMU	Adamawa State

Rauta I BENNETT	Bauchi State
Hauwa D HERIJU	Borno State
Martha F MSHEH'A	
Theresa INUSA	Kaduna State
Hajara S MUSA	
Sara SALEH	
Fatima A UMARU	
Alheri YAKUBU	
Herrietta ABDALLAH	Kano State
Florence AJAYI	
Esther AUDU	
Hauwa BELLO	
Sherifatu A JIMOH	
Ramatu DAGACHI	
Amina KABIR	
Kutaduku B MARAMA	
Hadiza MOHAMMED	
Mairo A MOHAMMED	
Mabel A OBAYEMI	
Comfort OYINLOYE	
Rabi RABI'U	
Amina UMARU	
Habiba A USMAN	
Adetutu S AJAGUN	Katsina State
Magajiya ALIYU	
Taibat AMINU	
Hauwa GARBA	
Halima IBRAHIM	
Kabir K LAWAL	
Ladi H MOHAMMED	
Halima I NOCK	
Saratu S SALEH	
Alia USMAN	
Aishatu M ANARUWA	Kebbi State
Aishatu SAMBAWA	
Kulu A SHAMAKI	
Leah T AMGUTI	Kogi State
Hajara JOSEPH	Niger State
Dorcas NATHANIEL	
Hauwa TAUHID	
Rhoda T AGANA	Plateau State
Victoria S HARRI	
Lami PAN	
Esther ADAMU	Sokoto State
Beatrice AKINMADE	
Elizabeth Y GAJE	Yobe State

operation theater nurses

Mohammed B A ADAMU	Adamawa State
Dahiru HALIRU	Kaduna State
Florence AJAYI	Kano State
Mairo ALIYU	
Ramatu DAGACHI	
Hadiza ISAH	
Amina KABIR	

Hadiza MOHAMMED	
Rabi RABI'U	
Maijiddah SAIDU	
Adetutu S AJAGUN	Katsina State
Taibat AMINU	
Saratu GAMBO	
Mohammed HASHIMU	
Halima IBRAHIM	
Kabir K LAWAL	
Hauwa MAMMAN	
Faruk SAMBO	
Alia USMAN	
nurses/midwives from Republique du Niger	
Zakari AYOUBA	MARADI
Maimouna Saidou BAGNA	

VVF/RVF-repairs in BIRNIN KEBBI/KANO/KATSINA/SOKOTO and MARADI centers

	B/KEBBI		KANO		KATSINA		SOKOTO		MARADI		
	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	-	311	37	562	60	98	5	66	2	1,182
1997 first half	45	2	162	21	285	32	22	3	32	1	568
total	89	2	2,453	256	5,182	420	323	19	98	3	**8,805**

total VVF-repairs and related operations: **8,105**

total RVF-repairs and related operations: **700**

total: 8,805

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: **397**

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%**

* sabbatical leave consultant for 6 mth

strategies in prevention of VVF in Nigeria
26th and 27th of February 1997
Plateau Hotel JOS

evaluation report 1984-1997

surgical developments

database and documentation

plans for the near/distant future

kees waaldijk MD PhD
chief consultant surgeon

evaluation report

Since January 1984 when the first VVF-repair was performed in Babbar Ruga Hospital in KATSINA, we have been planning and working very hard to develop a VVF-repair and -training service for (Northern) Nigeria within the existing health facilities of the Federation of Nigeria.

To be able to do this we have been working hand in hand with the National Task Force on VesicoVaginal Fistula, with the Grassroots Health Organization of Nigeria and with several Dutch NGOs of which the SK-Foundation and TTT-Foundation are the most important.

Since 1996 we have expanded our program to Southern Republique du Niger in an effort to become international.

This resulted into **three** major VVF-centers in Northern Nigeria, viz. **KANO, KATSINA and SOKOTO**, and **one** major VVF-center in **MARADI** in Southern Republique du Niger whilst also we affiliated with the Evangel Hospital in **JOS**.

Two of these centers function as (inter)national VVF-training centers, viz. **KANO** and **KATSINA**.

Sofar a total of **7,555 VVF-repair and 641 RVF-repairs** were performed with a success rate of **90% per operation** making a **grand total of 8,196 operations** within the 13-year period 1984-97. As the **overall success rate is 95%**, this means that more than **7,000 women have been rehabilated completely within the society**, and we are very proud of this. For this, I have to thank all the organizations and people involved for this major achievement.
At the moment we are performing **1,200 operations a year**.

During this period, a total of **79 doctors** were trained or attended our program from 21 states of Nigeria and 7 countries in 3 continents, Africa, Asia and Europe: 42 doctors with at least 3-year surgical experience, 15 senior registrars in obstetrics/gynecology, 10 consultant sugeons/gynecologists, 10 deputy surgeons and 2 senior registrars in anesthesia.
Also a total of **66 nurses/midwives** from 12 states of Nigeria were trained in the general management of VVF/RVF out of whom 19 received an additional training in theater techniques. Besides this, **2** nurses from Republique du Niger and **2** nurses from Sierra Leone attended our program.

surgical developments

In our efforts to make things simple, feasible, safe, effective and payable within the existing health facilities of Nigeria the following surgical assets were developed:

all surgery is done via the **vagina** and under **spinal anesthesia** and in the **(exagerated) lithotomy position**.

a **simple surgical classification** with implications for the operation technique and prognosis.

a **circumferential repair** of the **circumferential fistula** by circumferential dissection, advancement/caudad fixation of anterior bladder wall onto symphysis/urethra and end-to-end vesicourethrostomy.

a different approach for the very difficult **corner-corner fistulas**, though they remain troublesome due to the severe scarring.

a simple and effective technique for **postrepair stress incontinence**: anterior colposuspension by which the anterior vagina wall is fixed onto symphysis/abdominal wall.

covering of the neourethra in **urethra reconstruction** by several types of flaps to improve healing and blood supply and continence.

a mini-invasive operation technique for **sphincter ani rupture** with/without rectum trauma.

But the greatest success has been with the **immediate surgical management** of fresh obstetric fistulas. Already over 1,000 women have been treated with a succes rate of 95%. Besides its very high succes rate in terms of closure and continence, it prevents the woman from being ostracized.

database/documentation

The complete history, operation technique, complications and postoperative outcome of every single patient have been documented **meticulously** in computerized reports.

Over **25,000 full-color slides** and more than **40 hours of videotape of different operation techniques** have been produced.

A **complete database of the whole project** has been established comprising some **1.5-2 million parameters**.

Sofar, **10** half-yearly **evaluation reports** have been prepared and submitted.

plans for the near/distant future

near future 1997-2001
Preparations have been made to extend the VVF-repair service with **at least one new center a year**. Already this year we hope to start in B/KEBBI, ZARIA and HADEJIA.

A new 2-bedroom guesthouse has been erected at Babbar Ruga Hospital for accommodation of Nigerian doctors to be trained. By this we hope to intensify our training program.

We shall try to increase the number of operations up to **2,000 a year** by the year 2001.

distant future
A **masterplan for an all-Africa VVF-project** has been prepared already back in 1989, and slowly we shall try to implement it.

prevention

There is no relation to tribe, religion, culture, early marriage or anything else, except for **early intervention by CS within 3 hours**.

The obstetric fistula will disappear if **any** obstructed labor is relieved in time, i.e. by CS within 3 hours, **whatever the cause**!

The lesson learned from history is that this can only be achieved by proper antenatal/obstetric care, viz. by establishing a **network of 75,000 functioning obstetric units** evenly distributed throughout Africa.

As this seems to be a utopia for a long time to come (in the industrialized world it took almost 100 years!) and since there is a population explosion without a concurrent improvement in health facilities the occurrence of the obstetric fistula will increase.
Since the females themselves have to play the key role, **compulsory education of all the girls throughout at least form IV of secondary school is the starting point of everything**. This will make them confident to stand up for their rights on a safe motherhood.

conclusion

We have to start establishing a network of obstetric units to reach our goal of eradicating the obstetric fistula, the earlier the better.

In the meantime (some 100 years!) we have to rehabilitate the poor VVF-patients and we have to keep the expertise to do so at hand.

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

at

Babbar Ruga Fistula Hospital
<u>KATSINA</u>

and

Laure Fistula Center
Murtala Muhammad Specialist Hopital
<u>KANO</u>

by

Kees WAALDIJK, MD PhD
chief consultant surgeon

training curriculum for doctors
on
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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

types
pelvic assessment

antenatal care

pelvic assessment at first presentation
hospital care at **first** delivery

labor

mechanism of labor
management of labor - partogram
obstructed labor and its management
prevention of fistulas by **early** cesarean section

causes of VVF/RVF

direct
indirect
predisposing factors
CS-fistula

associated lesions

peroneal nerve trauma
vagina stenosis/shortening
cachexia
anemia
secondary amenorrhea

classification

according to location
according to size

history taking

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

clinical examination

- general health status: nutrition, anemia
- vaginal examination **without** anesthesia
- peroneal nerve trauma: grading of drop foot 0-5
- accessibility
- vagina stenosis
- urine dermatitis
- bedsores
- atonic bladder
- dye test by gentian violet
- 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)

- 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

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
chromic catgut
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
N.B. 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 thights
episiotomies
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
dissection/mobilization
bladder/urethra closure: transverse/longitudinal
static bladder capacity
FOLEY catheter and fixation
urethra length
elevation of bladder neck
gv check
vagina wall closure
episiotomy closure
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
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

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 **75,000 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 obstetric fistula as a major public health problem, as well as he must be able to handle **simple** repairs confidently.

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