national vvf project nigeria

evaluation report XIII

first half 1998

reprint

Babbar Ruga Fistula Hospital
KATSINA

Laure Fistula Center
KANO

Maryam Abacha Hospital
SOKOTO

General Hospital
HADEJIA

Special Fistula Center
BIRNIN KEBBI

General Hospital
GUSAU

Kofar Gayan Hospital
ZARIA

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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something to think about

in january a 17-yr-old teenager presented with the following history, symptoms and findings:

PIII (0 alive), ± 1 cm 0 vesicovaginal fistula slightly to the right at the cervix, leaking of urine for 22 days which started immediately following an obstructed last labor for 8 days, foot drop R (grade 3) and L (grade 2), no RVF, normal AP diameter/pubic arch

she had lost already two babies in her previous deliveries and was looking forward for a live child this time

he labor pains lasted for 5 days without progress; then she could not bear it any longer and had to lie down
two days later in a semiconscious state the head was delivered but she was too exhausted to push the child out
her family discussed her problem and they send for the medical man in her village; but he did not know what to do and advised them to take her to the hospital
however, this was easier said than done since the road to her village was not motorable and transport not available
they organized for a donkey but she could not sit on the donkey's back as the baby's head was between her legs; so, her brother mounted the donkey and held her in his arms
they walked for 2-3 hours through the semi-desert in the hot sun until they reached the "main" road
there they hailed a taxi but she could not sit (since the head was out) and lying was impossible inside the already overcrowded taxi; so her mother supported her half standing
one hour later they arrived in the hospital where the doctor was able to pull the dead male baby out at last, after the head had been hanging out for more than 1.5 days!

what a sad story and what a suffering, and … all for nothing

after early closure she was cured but what will happen next time?

to her or to any other woman with **obstructed labor** living in places without access to a functioning obstetric unit

XIIIth evaluation report
B_KEBBI/GUSAU/HADEJIA/KANO/KATSINA/SOKOTO/ZARIA and MARADI

introduction

The main reason for writing these reports is to create the awareness in the the industrialized world and in the developing world the obstretic fistula as a **major public health problem** deserves.

It cannot be stressed enough that we are running a public health programme which by its nature is a surgical programme: **public health surgery**. Prevention will remain a utopia.

This means that we are trying to reach as many patients as possible and to bring the service nearer to the patients since the action radius of a VVF-repair center is 100-120 km.

Some 60-70% of the patients are younger than 20 yr and 30% even younger than 16 yr, and a successful repair means a **spontaneous** total rehabilitation of these young **outcasts** into their own community; leave it to the African woman! So they will have another start at life.

At the moment we reach out to 7 centers in Northern Nigeria and 1 center in Southern Republique du Niger serving 40% of the Hausa/Fulani population and 20% of the Nigerian population.

Only by teamwork and involving as many persons/institutions as possible are we able to achieve anything.

We passed the **10,000 VVF/RVF-repair mark** and have to think and act bigger and bigger all the time.

Source of patient information: relation, hospital, old patient, radio.

There was fuel scarcity as well as unreliable electricity supply but on the whole we were able to execute our program. You loose some, you win some.

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 4 more states in Northern Nigeria, viz. Kebbi, Jigawa, Kaduna and Sokoto State, VVF-repair centers have been set up and are functioning up to a certain extent.
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.

Those centers are capable of dealing with VVF as a public health problem within these 8 states, covering 25% of the population.

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**.

Therefore we should concentrate on doing the only right thing, viz. setting up proper antenatal/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.

BIRNIN KEBBI

Despite good funding by the Tulsi Chanraj Foundation, the center is below any standard.

It is difficult to get the situation under control since it seems that the people involved are not interested though the staff have been trained.

GUSAU

The service was started in February, and we are satisfied with its functioning.

A new VVF-hospital is being built, and until it is finished a 10-bed ward in the General Hospital has been reserved for the VVF-patients.

HADEJIA

Dr Said AHMED is doing a fine job. We hope he will continue since recently he has been appointed as chief executive in the Ministry of Health.

KANO

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. Otherwise the electric autoclave cannot be used for sterilizing.

Since the appliances arrived the new operating table donated by the Irish Government is in full use contributing greatly to our program.

national training center:

The training of doctors and nurses has been integrated in our program.

KATSINA

At last we got hold and then **rid** of the persons (male and female) selling native medicine to the patients which has been the cause of several postoperative deaths.

Since the appliances arrived the new operating table donated by the Dutch Government is in full use contributing greatly to our program.

The Katsina Government promised to fully furnish our new guest house for (inter)national trainees.

(inter)national training center:

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

SOKOTO

facilities

The Maryam Abacha Hospital is doing fine. There are 4 postoperative wards with 10 beds each, making 40 beds available for our work.
Within the first year of its existence over 350 VVF-repairs were performed!

ZARIA

A start was made with a VVF-service in Kofar Gayan Hospital in ZARIA in Kaduna State.
We are highly impressed by the interest and dedication of all the staff as well as by the excellent pre-, intra- and post-operative care.

In the centers B_KEBBI, GUSAU, HADEJIA and ZARIA there is an urgent need for one hydraulic high-quality operating table; so four in total

Republique du Niger

MARADI

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.

traveling rhythm

To visit and perform surgery in all the centers the traveling rhythm by car on long, rough and dangerous roads is cruel:
first week: Katsina to Kano (200 km) to Zaria (175 km) to Sokoto (425 km) to Birnin Kebbi (175 km) to Sokoto (175 km) to Katsina (550 km)
second week: Katsina to Kano (200 km) to Katsina (200 km) to Maradi (100 km) to Katsina (100 km)
third week: Katsina to Kano (200 km) to Gusau (275 km) to Sokoto (225 km) to Katsina (550 km)
fourth week: Katsina to Kano (200 km) to Katsina (200 km) to Maradi (100 km) to Katsina (100 km)
and then this rhythm all over again and again, on an average base 1,000 to 1,200 km a week which takes some 12-15 hours, i.e. lost time for our repair service, and ... always a different "hotel" (room), a very **impersonal** life!

It means operating in the morning, then packing the suitcase, packing all the instruments etc., driving for some 2-7 hours, booking the hotel, going to the hospital to register and select the patients for the following day, organizing the evening/night staff for instructions, back to the hotel.

We are figuring out a rhythm with partial transport by air, then we shall be able to open more centers, but for the moment this is it.

further expansion throughout Northern Nigeria

Time has come now to consolidate the existing centers first before further expansion can be considered.
Especially the transportation problem has to be solved, otherwise we end up spending more time in the car than in the operating theater.

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.

Dr Jan van der HORST, health expert at the Dutch Embassy in BAMAKO in Mali came for introductory discussions to extend the programme further thru West Africa.

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

The main problem is not the money, since that would amount to roughly one million US dolars a year, but the fact that the industrialized world is not aware of the extent of this problem!!

activities

postgraduate training (see Annex I)

Since training is a continuous process Dr Idris HALIRU and Kabir K LAWAL conducted an on-the-job training program in 4 of the centers (see annexes). As well some of the surgeons are coming back for advanced training.

Introductory discussions were held with SOGON to incorporate VVF-training into the curriculum of all registrars in obstetrics/gynecology.

general doctors/senior registrars/deputy surgeons/visiting consultants
Sofar, a total of **98** doctors have been trained or attended our programmes: 48 doctors with at least 3-year surgical experience, 20 senior registrars in obstetrics/gynecology, 14 consultant surgeons/gynecologists, 14 deputy surgeons and 2 senior registrars in anesthesia.

(theater) nurses/midwives
A total of **72** nurses from all over the Federation of Nigeria attended and completed the course(s); as well as **2** nurses from Republique du Niger and **2** nurses from Sierra Leone.

surgery (see Annex II)

In March the **10,000th** repair was performed within the whole project but it is only the start of what we would like to have: an all_Africa project!

This could only haved been done by working as a team, and I have to praise the surgeons in the different centers for this, especially Dr Idris HALLIRU in KATSINA, Dr Immam AMIR in KANO and Dr Said AHMED in HADEJIA as well as Dr Iliyasu ZUBAIRU who traveled many times to SOKOTO.

During the first half of 1998 a total of 825 procedures were performed, i. e. 748 VVF-repairs and 77 RVF-repairs.

Since the beginning of the project in 1984 a **grand total of 10,603 VVF/RVF-repairs and related operations** have been performed.

research

generally

The intention has been and still is: **make complicated things simple, effective, feasible, safe and payable under primitive circumstances!**

Since we started we have used a one-layer closure by interrupted sutures and now we are trying an additional **sealing off** by a continuous suture as well to find out if the success rate at closure will improve; it is not a second layer as it runs very superficially.

VVF-surgery

circumferential fistulas type IIAb

The circumferential repair by end-to-end vesicourethrostomy is the **logical** solution since it aims at restoring the "normal" anatomic and physiologic relations between the bladder and the urethra and so creates a **functioning closing mechanism** whatever that may be.
Specifically the outcome as to **continence** is far superior than with other techniques.

post-repair stress incontinence grade II-III

The problem is that there is **actual tissue loss** which makes this different from genuine urinary stress incontinence.
Vaginal anterior colposuspension whereby the **anterior vagina wall is fixed onto the anterior abdominal wall (without a gap) and the symphysis** has been the standard approach for the last 4-5 years with good results.

immediate surgical management; by means of catheter and/or early closure

Already some **1,300 patients** have been treated with a **success rate of almost 95%!** Immediate bladder catheterization (as soon as leakage starts!!) with high oral fluid intake (at least 4-6 litres/24 hr) is a must, and **456** patients have been cured by this simple regimen only. It does not matter who inserts the catheter as long as it is being done.

micturition under supervision

Some 20% of the patients with severe incontinence do respond favourably to this programme once they understand its meaning.

RVF-surgery

sphincter ani rupture

The technique for sphincter ani rupture (with or without rectum trauma) has been simplified to a **mini-invasive procedure** with excellent results.

RVF-repair

It seems that longitudinal closure gives a better result but fistulas near the cervix have to be closed transversely.

spinal anesthesia

Spinal anesthesia is a major part of the training since it will be an asset to every surgeon looking after his own anesthesia.
Not giving a premedication (resulting in lower blood pressure) and **keeping the legs horizontally (no blood pooling in the legs)** seems to prevent the occurrence of shock.

Preloading by expensive iv fluids is superfluous and it has **never** been performed in over 10,000 spinal anesthesia procedures. Though the blood pressure comes down, shock has **not** been encountered!

database
The strength of the program is based on a **total** documentation of all activities and patient/operation/outcome data which means that we have some 2,000,000 parameters to work out. This will be done at a suitable time but for the time being we have other priorities.
Some 30,000 full-color slides are available and at the moment we are trying to prepare digital video instruction tapes of the different operation techniques.

funding
Basically the project is funded by the Federal Government and by the individual State Governments of Nigeria but this is not sufficient.

Internal Nigerian funding came from the following organizations all within LAGOS: the Dutch Embassy, the Irish Embassy, the French Embassy, the Executive, the Nordic Women's Club and Maersk Line; as well as from Grassroots Health Organization of Nigeria within KANO.

External funding is provided by several Dutch NGOs of which the SK Foundation in combination with the TTT Foundation are the most important. Also the Wereldwinkel in MAASTRICHT is of consistent help. SIMAVI is sponsoring a digital video project of the operation techniques.

VVF-tourism
Little knowledge is dangerous. Another team from the same university (where there are **no** obstetric fistulas) came and ... **tried** ... to operate with the same disappointing results: too arrogant to accept our invitation to teach them and knowing it al better!!
Several patients ran away or refused to be operated since they are too intelligent to be fooled by verbal boasting and bad performance. This is not abdominal surgery where nobody can see what has been done inside!
At this place we continue to offer anybody training facility to understand the problems involved.

conclusion
For Kano State and Katsina State a functioning VVF-service has been established including a training programme for doctors and nurses from all over the Federation of Nigeria.
In 5 other states in Northern Nigeria viz. Gusau, Jigawa, Kaduna, Kebbi and Sokoto also a VVF-repair service has been set up.
In Plateau State Dr J KARSHIMA is running a fine center whilst in Southern Nigeria Dr Ann WARD is doing an excellent job in Akwa Ibom State.
So easy access to a VVF/RVF-repair service has become available for victims within some 25% of the Nigerian population.
In Departement du Maradi in Southern Republique du Niger patients also can attend a VVF-repair service.
Though quite some success has been achieved, far more has to be done before the obstetric fistula is eradicated.

Now we have to consolidate the project first before we expand further since this is only possible by using (partial) transportation by air.

P.S.
what about the rest of the 1,5-2 million VVF-patients in Africa? and .....
which organization/foundation/government is willing to finance the project?
an International Obstetric Fistula Foundation is long overdue!!!

Kees WAALDIJK, MD PhD
chief consultant surgeon
Babbar Ruga Fistula Hospital
P.O.Box 5
KATSINA

list of trainees

present deputy surgeons

Dr Hassan Ladan WARA	VVF Center, B/KEBBI
Dr Sa'ad IDRIS	General Hospital, GUSAU
Dr Said AHMED	General Hospital, HADEJIA
Dr Immam AMIR	Laure Fistula Center, KANO
Dr Haliru IDRIS	Babbar Ruga Fistula Hospital, KATSINA
none	Maryama Abacha Hospital, SOKOTO
none	Kofar Gayan Hospital, ZARIA
none	CHD, MARADI, Republique du Niger

past deputy surgeons

Dr Idris S ABUBAKAR	Laure Fistula Center, KANO
Dr Said AHMED	
Dr Iliyasu ZUBAIRU	
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 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 Yusuf ALIYU	Kaduna State
Dr Immam AMIR	Kano State
Dr Ebenezer APAKE	Taraba State
Dr Yusha'u ARMIYA'U	Katsina State
Dr Salisu Mu'azu BABURA	Jigawa State
Dr Shehu BALA	Katsina 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 Ahamed GADA	Sokoto State
Dr Gabriel HARUNA	Kaduna State
Dr Kabir Aliyu IBRAHIM	Jigawa State
Dr Saidu A. IBRAHIM	Jigawa State
Dr Haliru 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 Sabi'u LIADI	Katsina State
Dr Ado Kado MA'ARUF	Katsina State
Dr Danmalam MAICHEDE	Sokoto 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 Sani Ibrahim UMAR	Kano State
Dr (Mrs) Yalwa USMAN	Kano State
Dr Hassan Ladan WARA	Kebbi State
Dr Aqsom WARIGON	Adamawa State
Dr Munkaila YUSUF	Kano State

<u>senior registrars in obstetrics/gynecology</u>

Dr Oguntayo Olanrewaju ADEKUNLE	ZARIA
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 Yusuf Mohammed KASIM	ILORIN
Dr Ijaiya MUNIR-DEER	ILORIN
Dr Jesse Yafi OBED	MAIDUGURI
Dr Nworah OBIECHINA	ENUGU
Dr John OKOYE	ENUGU
Dr Benneth ONWUZURIKE	ENUGU
Dr Ishaya Chuwang PAM	JOS
Dr Abdullahi Jibril RANDAWA	ZARIA
Dr Mansur Suleiman SADIQ	KANO
Dr Dapo SOTILOYE	ABEOKUTA
Dr Emmanuel UDOEYOP	JOS
Dr (Mrs) Marhyya ZAYYAN	KADUNA

<u>senior registrars in anesthesia</u>

Dr Saidu BABAYO	Bauchi State
Dr Abdulmummuni IBRAHIM	Katsina State

<u>visiting consultants</u>

Prof Dr Shafiq AHMAD	PESHAWAR, Pakistan
Dr Said AHMED	HADEJIA, Nigeria
Dr Fons A AMAYE-OBU	NEW YORK, USA
Dr Abdulmalik BAKO	ZARIA, 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
Dr E.E. ZAKARIA	FUNTUA, Nigeria
<u>medical anthropologist</u>	
Sandra BOER	AMSTERDAM, Holland
<u>physiotherapists</u>	
Garba M FAGGE	Kano State
<u>nurses</u>	
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	
Hamisu ABDULLAHI	Katsina State
Adetutu S AJAGUN	
Magajiya ALIYU	
Taibat AMINU	
Hauwa GARBA	
Halima IBRAHIM	
Gambo LAWAL	
Kabir K LAWAL	
Ladi H MOHAMMED	
Halima I NOCK	
Saratu S SALEH	
Alia USMAN	
Aishatu M ANARUWA	Kebbi State
Safiya Isa MANGA	
Aishatu Y MOHAMMED	
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	
Hamisu ABDULLAHI	Katsina State
Adetutu S AJAGUN	
Taibat AMINU	
Saratu GAMBO	
Mohammed HASHIMU	
Halima IBRAHIM	
Gambo LAWAL	
Kabir K LAWAL	
Hauwa MAMMAN	
Faruk SAMBO	
Alia USMAN	
nurses/midwives from Republique du Niger	
Zakari AYOUBA	MARADI
Maimouna Saidou BAGNA	
other nurses/midwives	
Feonagh COOKE	Sierra Leone

repairs in BIRNIN_KEBBI/GUSAU/HADEJIA/KANO/KATSINA/SOKOTO/ZARIA and MARADI centers

	kebbi		**gusau**		**hadejia**		**kano**		**katsina**		**sokoto**		**zaria**		**maradi**		
	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 1st half	17	2	14	3	95	3	159	16	246	39	175	21	14	2	18	1	825
total	**165**	**4**	**14**	**3**	**392**	**7**	**2,745**	**289**	**5,656**	**482**	**657**	**51**	**14**	**2**	**117**	**5**	**10,603**

total VVF-repairs and related operations: **9,760**
total RVF-repairs and related operations: **843**

total: 10,603

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: **456**

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%**

known performance of trainees

Dr Said AHMED	over 900 repairs
Dr Ilyasu ZUBAIRU	over 550 repairs
Dr Yusha'u ARMIYA'U	over 400 repairs
Dr Idris HALLIRU	over 250 repairs
Dr Bello Samaila	over 250 repairs
Dr Immam AMIR	over 200 repairs
Dr Jabir MOHAMMED	over 200 repairs
Dr Aliyu SHETTIMA	over 200 repairs
Dr Aminu SAFANA	over 150 repairs
Dr Hassan WARA	over 100 repairs
Dr Idris ABUBAKAR	over 100 repairs
Dr Isah I SHAFI'I	over 100 repairs

no data are available for the other trainees

International Workshop on VesicoVaginal Fistula
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new developments in the (surgical) management of the obstetric fistula

kees waaldijk MD PhD
chieg consultant surgeon
babbar ruga fistula teaching hospital

abstract

In a continuous effort to make complicated things simple, safe, effective, feasible and payable under primitive conditions, several new developments have come up. Sound basic surgical principles have to be applied within a public health fistula surgery programme where sofar over 10,000 repairs have been performed in 7 major centers.

A surgical classification has been developed according to location and size of the fistula with consequences for the operation technique and outcome, both in terms of closure and continence. This classification enables a systematic comparison of different operation techniques and an objective evaluation of results from different centers.

Since the fistula is caused by pressure necrosis and not by infection, the routine use of antibiotics seems to be illogical, and as such contraindicated. In other forms of necrosis, viz. bedsores (pressure necrosis) and burn wounds (thermal necrosis), where the defects are far larger than in the obstetric fistula the prophylactic use of antibiotics is even considered to be malpractice. The same applies to septic surgery.

A logical approach to the circumferential fistula seems to be circumferential dissection, advancement and circumferential closure by end-to-end vesicourethrostomy. This shows a far better success rate as to closure and as to continence.

After so many techniques had been tried a vaginal anterior colposuspension is now the approach of choice to postfistula stress incontinence. The anterior vagina wall functions like a hammock.

Immediate management of obstetric fistula by catheter and/or early closure in over 1,200 patients gave a success rate of 95% at first attempt; severe incontinence rate of only 2-3%. From these results it can be concluded that any woman who starts leaking post partum should have an indwelling catheter for at least 4-6 weeks. Then an early closure should be performed as soon as the fistula edge is clean, if necessary after excision of slough, unless it has healed already by catheter treatment (some 10%).

introduction
In a continuous effort to make complicated things simple, safe, effective, feasible and payable under primitive conditions, several new developments have come up. Sound basic surgical principles have to be applied within a public health fistula surgery programme where sofar over 10,000 repairs have been performed in 7 major centers, B/KEBBI, HADEJIA, GUSAU, KANO, KATSINA, SOKOTO in Northern Nigeria and MARADI in Southern Niger.

surgical classification
In order to compare operation techiques systematically and to evaluate the results from different centers objectively, a surgical classification has been developed.
This classification is based on the anatomic/physiologic location of the fistula

classification of fistulas

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** ureter fistulas and other exceptional fistulas

further classification as to size

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

The operation becomes progressively more complicated and the results progressively worse from type I thru IIBb

antibiotics
Since the fistula is caused by pressure necrosis and not by infection, the routine use of antibiotics seems to be illogical, and as such contraindicated. In other forms of necrosis, viz. bedsores (pressure necrosis) and burn wounds (thermal necrosis), where the defects are far larger than in the obstetric fistula the prophylactic use of antibiotics is even considered to be malpractice. The same applies to septic surgery.
The main thing is to make sure there is an oral fluid intake of at least 4-6 liters per day (in whatever form) in order to produce a minimum of 4,000 ml clear urine per 24 hr. That will prevent any ascending urinary tract infection.

circumferential fistula type IIAb
since the mechanism of action is a total detachment of the urethra from the bladder, the logical approach seems to be a circumferential end-to-end vesicourethrostomy to restore the original anatomy/physiology.

This can be done easily in the exaggerated litotomy position by a. circumferential mobilization of the bladder from avw/pubic bones/symphysis/anterior abdominal wall, b. advancement/caudad fixation of the anterior bladder wall onto symphysis/urethra and c. circumferential UVVF-repair by end-to-end vesicourethrostomy

anterior colposuspension

After so many techniques had been tried a vaginal anterior colposuspension is now the approach of choice to postfistula stress incontinence. The anterior vagina wall functions like a hammock.

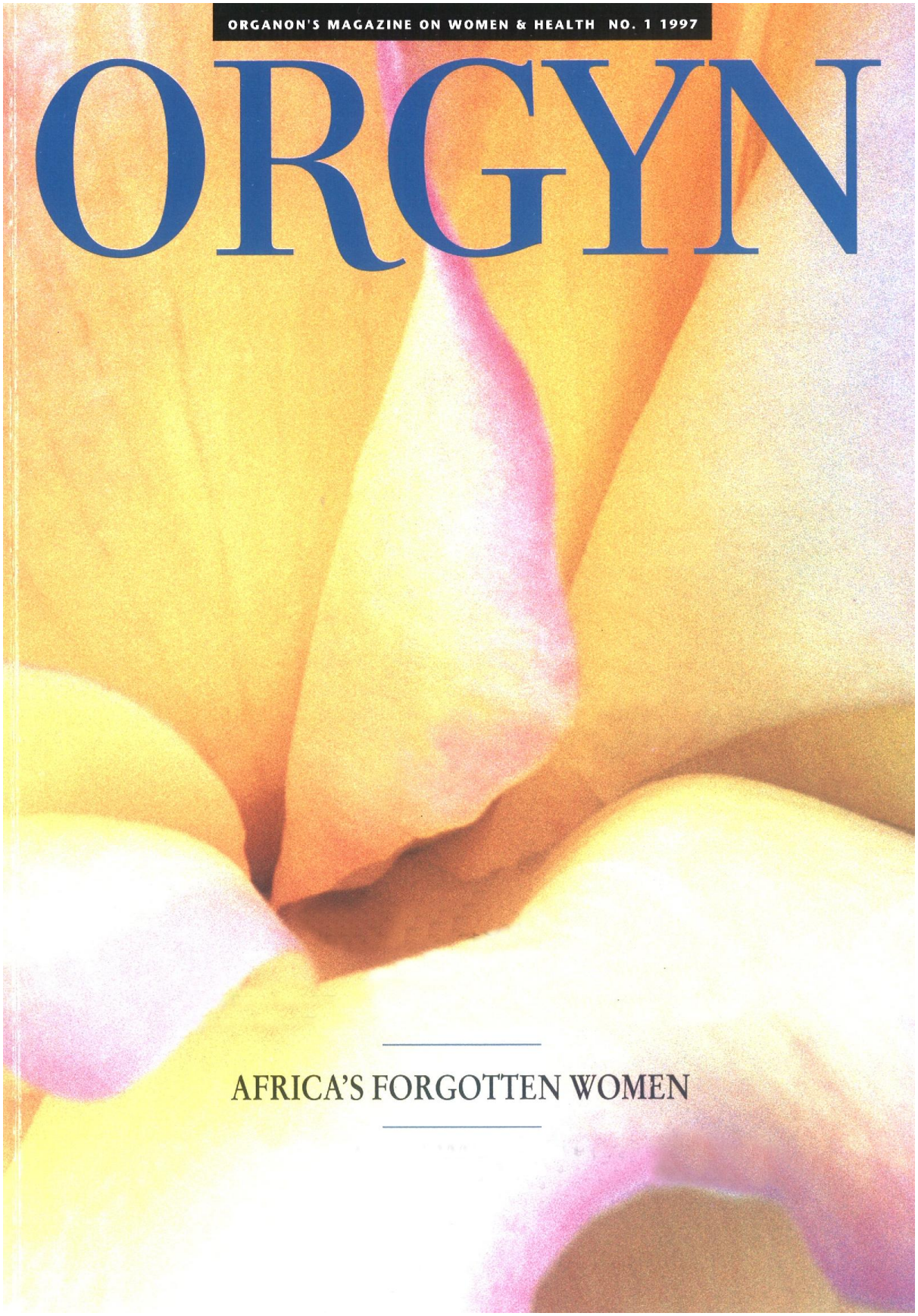
immediate (surgical) management of the obstetric fistula

Immediate management of obstetric fistula by catheter and/or early closure in over 1,200 patients gave a success rate of 95% at first attempt; severe incontinence rate of only 2-3%. From these results it can be concluded that any woman who starts leaking post partum should have an indwelling catheter for at least 4-6 weeks. Then an early closure should be performed as soon as the fistula edge is clean, if necessary after excision of slough, unless it has healed already by catheter treatment (some 10%).

conclusion

Since development is a continuing process, we have to keep our eyes on the future never looking back but trying to improve upon what we have achieved.

kees waaldijk MD PhD 1st of March 1998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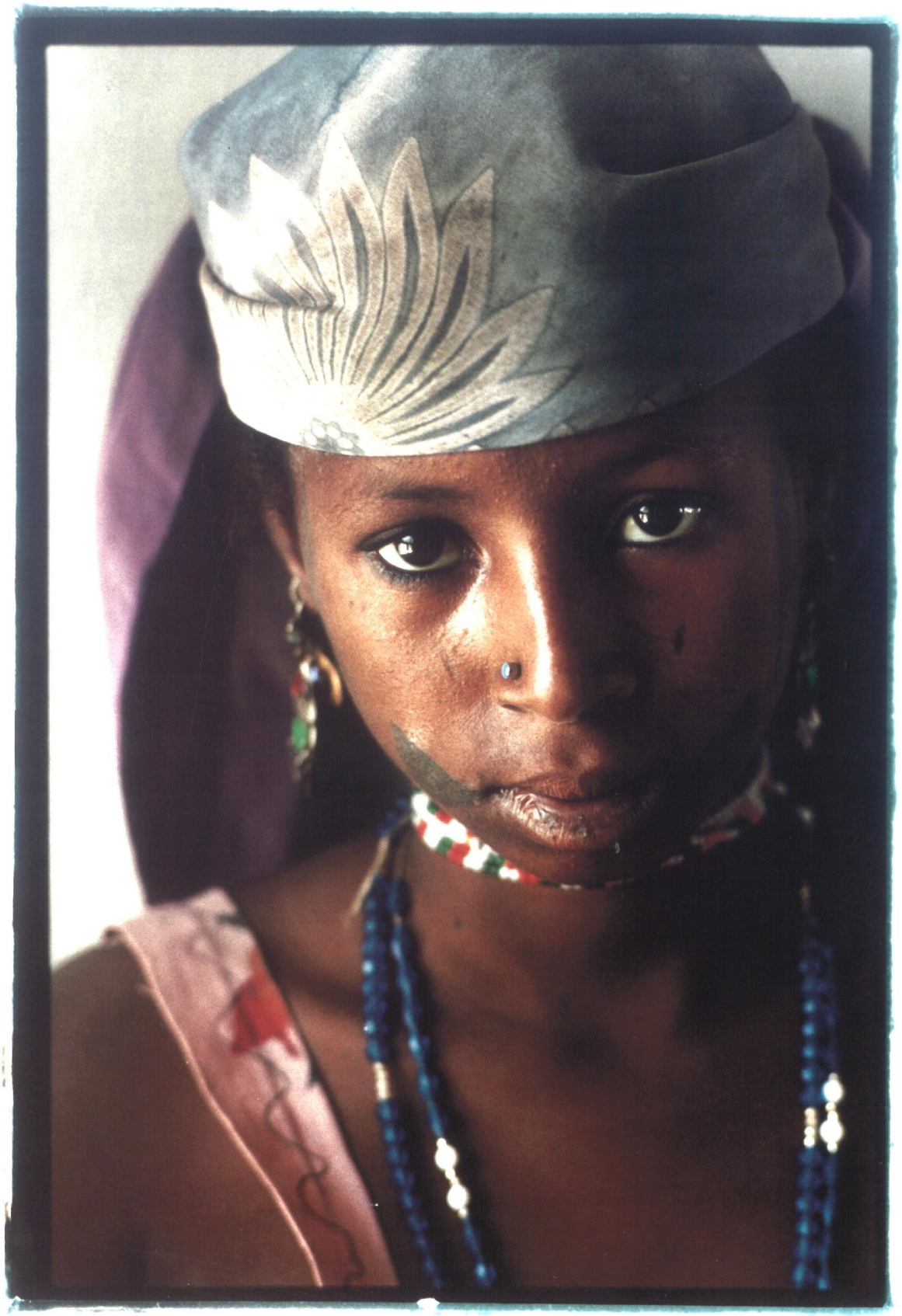
AFRICA'S FORGOTTEN WOMEN



Sweet sixteen – but this sixteen-year-old girl from Katsina, suffering from tuberculosis, came to the Babbar Ruga Hospital for repair of an obstetric fistula

AFRICA'S FORGOTTEN WOMEN

For the past 13 years, in the most basic conditions, a general surgeon from The Netherlands has devoted himself to the repair of obstetric fistulas in the women of Northern Nigeria

TEXT LIZ HUNT

IT WAS 5.30 PM AND THE END OF ANOTHER LONG DAY AT the Babbar Ruga Fistula Hospital in Katsina, Nigeria. Dr Kees Waaldijk – Dr Kees as he is known to staff and patients – who had started work at 7 am, had performed one recto-vaginal fistula (RVF) and five vesico-vaginal fistula (VVF) repairs, completed detailed notes on each patient, seen a dozen post-operative cases and a similar number of new patients, and dealt with a stream of administrative queries. Now, as he made a final comment in a patient's case notes, an ice-cold "Star" – the local beer – was uppermost in his mind.

Outside, the burning heat of the day had given way to cooler evening air, and women were cooking over charcoal fires beneath the trees of the sprawling, litter-strewn hospital grounds. The acrid smell of smoke mingled with the occasional waft of jasmine from the greenery that draped the ramshackle wards nearby.

Most of the women were Dr Kees' patients, some with young children in tow, others with elderly mothers and grandmothers here to care for their daughters and granddaughters in the days after their operation. Spotting the long, lean figure of Dr Kees heading towards his car, they left their fires to converge on his battered old vehicle, shouting to him, waving, singing and clapping with big smiles and laughing eyes: "Dr Kees . . . Dr Kees," they chorused. He turned, and raising his arms in front of him, said: "One man, two hands – and so many women."

A Bush Doctor

Dr Kees Waaldijk describes himself simply as a "bush doctor", a general surgeon from Amsterdam who has worked in 30 hospitals, for aid agencies and refugee camps on three continents. Now at the age of 55, after a lifetime of "looking for something, always I felt I was looking", he believes he has found it here in Northern Nigeria.

He is one of only four surgeons in the world – all of them in Africa where 85 to 90 per cent of all obstetric fistulas occur – to have performed more than 1000 VVF/RVF repairs. He has established an innovative public health surgery service on a shoestring budget, trained more than 100 doctors and nurses in the necessary skills of repair, and is now poised to expand the venture in Africa – funds and international support permitting.

For nine months of the year this charismatic figure with enormous energy and drive endures the most basic of lifestyles, and works in the most primitive of hospitals with minimum support. He retains one simple goal: to improve the lot of some of the world's poorest women. In 13 years he has operated on nearly 8000 of them. He has transformed their lives and restored them to their rightful place in society, respected as wives and mothers.

Dr Kees' patients are the forgotten women, rejected by their husbands and sometimes their families because their bodies have suffered extensive trauma during childbirth. They are rejected because they smell, from the constant, uncontrolled dribble of urine and leaking stools. They are regarded as dirty, infectious; and their affliction is a taboo subject that cannot be discussed by decent people. Some became pregnant as young as 13 or 14 , and have been incontinent for decades. A woman without a man or a family to support and protect her has few options in Nigeria. Many are forced to become "10 cents a time" prostitutes, to beg or live in seclusion outside their villages in a women's compound. "They really belong to the poorest of the poorest in the world," Dr Kees says. Until he came there was no treatment available for obstetric fistulas, except for those who could afford to pay for the operation in a private hospital.

Modern medicine and antenatal care have consigned genito-urinary fistulas in the developed world to the medical history books. But in the developing world it is a different story. Obstetric fistula is a major public health problem and a growing one. Epidemiological data is

scarce but at a conservative estimate there are up to two million cases worldwide, 100,000 in Northern Nigeria. With a minimum incidence of obstetric fistula put at two per thousand deliveries, and health-care services deteriorating in many of the countries worst affected, more and more women face life as "social and physical cripples" because of VVF, says Dr Kees .

Obstructed labour, mainly as a result of unavailable obstetric care, accounts for about 85 per cent of fistulas. Another common complication of obstructed labour is "foot drop". Movement of the feet can be impaired if the baby's head presses on the peroneal nerve.

If the obstruction is not relieved within three hours by a Caesarean section, then tissues start to die, compressed between the pubic symphysis and the baby's skull. A fistula may develop between the bladder and vagina, the urethra and vagina, the bladder and cervix or uterus, or between the urethra and vagina. Collectively, they are known as VVF, accounting for most cases. In about 15 per cent, a hole develops between the rectum and vagina (RVF).

The degree of damage can vary – from a tiny fistula causing intermittent leakage only when the bladder is full,. to almost total destruction of the genito-urinary structures. Dr Kees remembers in precise detail one of the worst cases he ever saw. The patient was just 14 years old and had presented with "one big cloaca".

In fact nearly one third of all cases of obstetric fistula occur in girls under 16, and 70 per cent in women under 21. It may be their first pregnancy or their fifth or sixth when it happens. For the lucky few the fistula may heal spontaneously, or with the help of a temporary indwelling catheter. But for the vast majority surgical repair is the only solution.

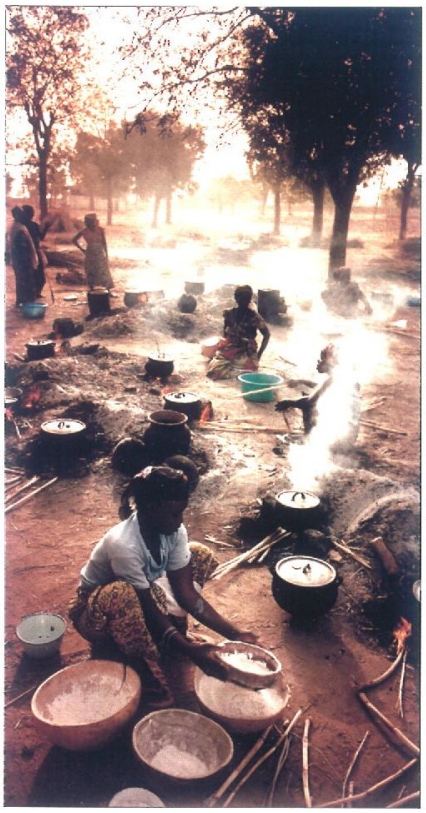
The first operative procedure for VVF was described by another Amsterdammer, Hendrick van Roonhuyse, in 1663, and the fundamental principles of his work still apply today. No great advance occurred until 1852 when James Marion Sims, "the father of modern gynaecology", published his classic article on the surgical treatment of VVF. He had operated 30 times on his patient, a woman named Anarcha, to achieve his first cure.

As the incidence of VVF and RVF declined in the industrialized world throughout the 20th century, so did the interest of surgeons. Like so many health problems, the plight of African women did not touch their consciousness, nor has it attracted the attention of the larger aid agencies.

At the Sharp End of Medicine

For Dr Kees, the discovery of the "forgotten women" happened almost by chance. He arrived in Nigeria in 1983 at the invitation of the Government to manage the Katsina State leprosy/tuberculosis programme at the Babbar Ruga Hospital. It was yet another milestone in a career driven by a boyhood dream of working as a doctor in a developing country, at the sharp end of medicine. He graduated from the Free University of Amsterdam in 1969, and spent a year in the army before beginning his residency in surgery, obstetrics and gynaecology at the St Lukas Hospital in Amsterdam. When the opportunity arose to work in Africa, he grabbed it. Thus, armed with a diploma in tropical medicine from the Royal Tropical Institute in Amsterdam and with further training at the leprosy organization ALERT in Adis Abeba, he left for Kenya, to spend three years as medical officer and leprosy/tuberculosis doctor at the district hospital in Msambweni.

> Dr Kees' patients are the forgotten women, rejected by their husbands and sometimes their families



Left: For a fortnight after the operation patients stay in the pastures behind the hospital, where family members take care of the cooking

Right: Entrance of the Babbar Ruga Fistula Hospital. The hospital is dedicated solely to fistula repair on behalf of the poorest of the poor

Right below: Queuing up for an operation. Dr Kees operates on five or six women a day; a routine he keeps up for four days in Katsina and three days in Kano

He returned to Europe in 1975 to take up a short-lived residency in gynaecology/obstetrics at the University Hospital in Nijmegen. Between 1976 and 1983 he held senior consultant surgical posts in several German hospitals, interspersed with a one year sabbatical in 1979/1980 in a Kampuchean refugee camp in Khao I Dang, Thailand.

By 1983 Dr Kees was ready for a new challenge. Back in Katsina State, when the leprosy/TB programme was running smoothly, he would occasionally visit the General

Hospital in Katsina town to operate on whoever came his way – much to the irritation of the regular doctors. It was there in 1984 that he did his first VVF repair; then another and another, as women began hearing of the success and travelled to seek his help. Soon he was operating on them at his own hospital, the Babbar Ruga Hospital, and his eyes were opened to the enormity of the problem.

It became a dominant interest, growing from its embryonic stages at the Babbar Ruga Hospital to its full fruition at the Murtala Muhammed Hospital in Kano, Nigeria's third largest city, where it was backed by the National Council of Women's Societies. Demand grew yet again as the project received national publicity through the specially created National Task Force on VVF, which was now converted into a non-governmental organization. In his first year in Katsina Dr Kees carried out 89 VVF/RVF repairs; in 1995 the total had risen to 1,184 operations performed in clinics in Katsina, Kano, and Sokoto (which had opened in 1995). Today at the Babbar Ruga there is a 37-bed post-operative ward and four 50-bed hostels; Kano has a 20 bed post-operative ward and a 50-bed hostel in the city. One year ago the VVF programme went "international" when a new clinic opened at a hospital in Maradi, Niger.

Training Programmes

More than 70 doctors and 60 nurses have now attended VVF training programmes in Kano, Katsina, and Sokoto. It is vital work, says Dr Kees, but creates enormous stress. Although the doctors are qualified, many must be taught basic techniques. But without training for local doctors, there is no long term future for the programme. "This should be part of the training of every gynaecologist in the tropics," he insists. "In just four weeks here in Katsina you would see more than 100 patients and learn all you need to know about VVF repair. "

A typical week for Dr Kees is four days at Katsina and three in Kano, operating on up to five or six women a day.

Once every two weeks he spends a day operating in Maradi, and once every six weeks visits Sokoto. The routine – power failures permitting – is monotonous. Patients are prepared for surgery by nurses before Dr Kees administers spinal anaesthesia. He clearly enjoys the surgery. It may take 10 minutes for a fistula, or an hour or more for more complex repairs and reconstruction. "What I like best," he says, "is that all the skills I have picked up over the years come together in this procedure." Every spare minute of every day is spent compiling records for research, an important part of his work. Much of his month-long visits to The Netherlands every three months are occupied in writing up his work for publication.

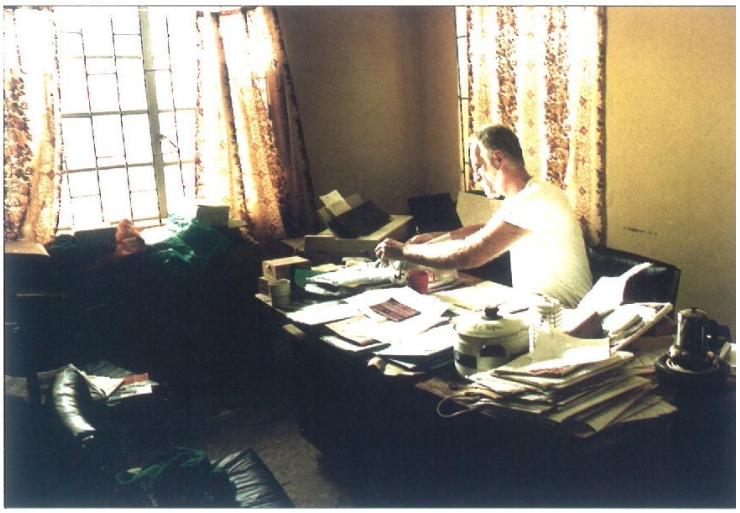
But in Nigeria time is at a premium. Every day he also sees new patients and post-operative cases as well as operating on up to seven patients a day. These women, each with a bright plastic potty in hand into which the catheter tubing trails, begin gathering outside his office towards late afternoon. They are quizzed on how much water they have been drinking, how much urine they pass, whether it is clear or cloudy. "When they first start to leak they stop drinking because it seems to ease the problem," Dr Kees explains. "But then there are other problems – bladder infections, cystitis, stones. They have to be re-educated to drink at least four to six litres every 24 hours, and urinate at least 4000 ml under supervision. They won't be discharged until they can do it."

It's a comical scene. Standing almost two metres tall, Dr Kees towers above the women, even when seated at his desk. He is gruff but kind, barking questions at them and barely waiting for the answers. The youngest sometimes shake with nerves and whisper their replies, but the older women are confident, almost flirtatious. They wear their brightest dresses, do their hair and paint their hands and nails to see him, a sign of respect and affection for a man whom they eulogize in songs for visitors. The catheter is removed after two weeks, and the intravaginal suture one week later. The women are asked to return two weeks after discharge for another check, and 90 per cent of them do.

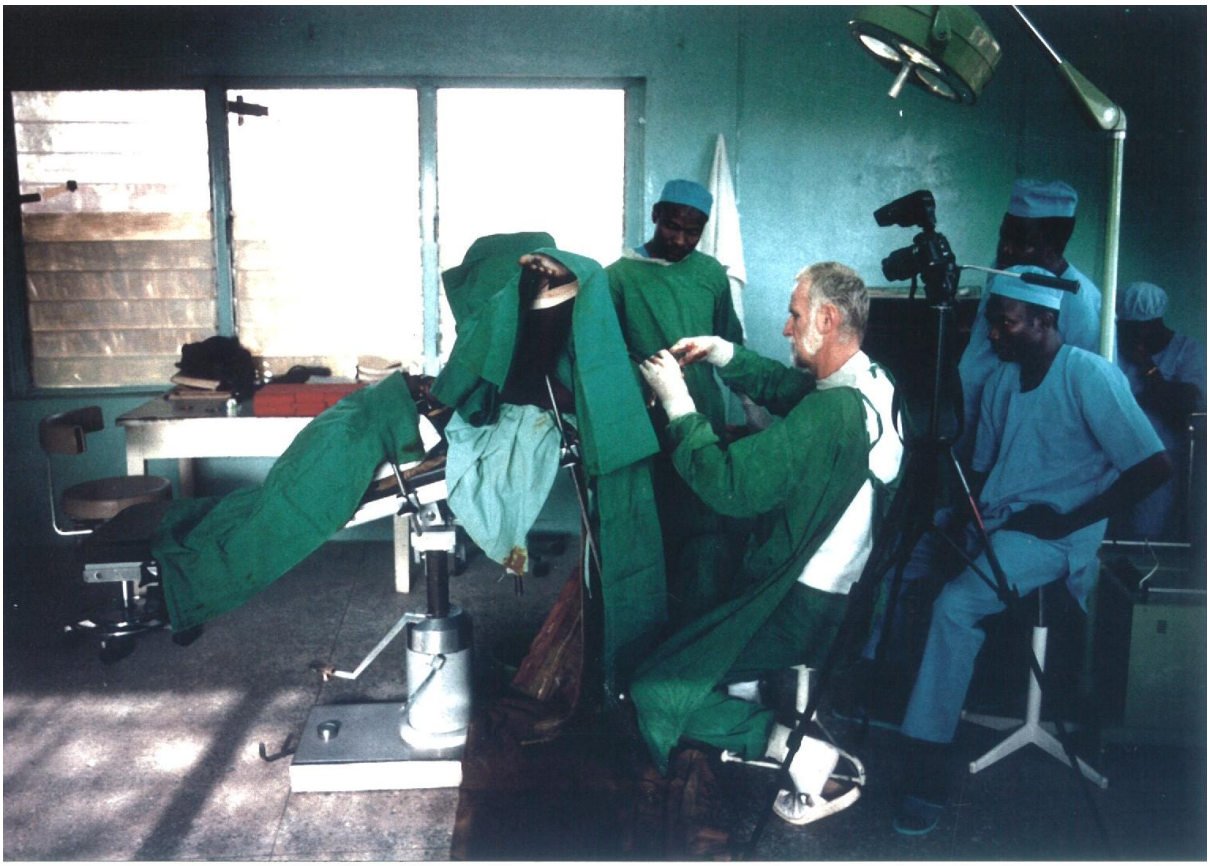
Building on his brief period of training in gynaecology, Dr Kees has largely learned about fistula repair by trial and error, developing his own techniques and adapting existing ones. However, he spent a month in 1985 at the Fistula Hospital for Poor Women in Addis Ababa, Ethiopia, where two Australian gynaecologists, Reginald and Catherine Hamlin, have pioneered VVF repair. "They taught me the difficult ones," he says.

He is proud of the fact that he has now reduced VVF repair to its bare essentials, to make it workable where conditions are primitive and money is scarce. Pride in achieving so much with so little is evident. For example, he has dispensed with general anaesthesia, and has pioneered an "early closure" technique whereby painless VVF repair can be performed without anaesthetic in women who have given birth within the last four to six weeks. He acknowledges that his is an unorthodox approach, but a success rate of 90 per cent per operation for VVF closure, 85 per cent for RVF, and an infection rate of less than two per cent are his validation. He avoids antibiotics – which the hospital couldn't afford anyway – preferring instead to spend money on dietary supplements and drugs for his most needy patients.

Money is a constant problem. Financial support by the Government of Katsina state provides the basics, but he relies on donations from European aid organizations to pay for operating tables, suture materials, and other necessities. Each patient has to buy her own catheter at a cost of 50



Every evening, minute details of each operation are entered into the patient records. Results and extraordinary case-histories are published in annual reports and specialist literature



"For every one woman who steps off, two jump on. That's the only thing that gets me down, not the operation"

naira – less than a dollar. "It is a good system," he says. "If they get it free they have no respect."

Visitors to Dr Kees are expected to share his unrelenting way of life, to start the day at 7 o'clock sharp and survive on a couple of cups of coffee and the occasional handful of peanuts. He eats one meal a day at a local restaurant, choosing from a limited menu of cow's tail soup – a fiery pepper soup – or chicken and chips. He has no telephone, television, radio or hi-fi, and is grateful for any magazines and newspapers visitors may bring. He used to read a lot, he says, but not any more. Apart from tennis, which he plays most nights, he appears to lead a monk-like existence.

In the cluttered office, where dust lies thickly over heaps of files and rows of books, where KLM calendars from years ago hang in haphazard fashion, Dr Kees admits: "I do take care of myself. You have to. I won't work at night but I will work all day. I don't get depressed except by the numbers. It is like a conveyor belt . . . endless. For every one woman who steps off, two jump on. But it's only this that gets me down, not the operation. I never get bored with that."

His short-term ambition is to open one new clinic every year in Nigeria – Zaria is the next venue. But the long-term goal is to reach as many women and train as many doctors as he can in VVF in Africa. To do this, he says, he needs the support and dollars of a big organization like the UN or WHO. Each year he sends potential supporters a copy of his evaluation report, plus his VVF plan for the rest of Nigeria and expansion into other countries. Start-up costs for the first two years are estimated at US $500,000 maximum. This would provide training for at least three or four doctors a year and increase the number of operations a year to 2,000 within two years, rehabilitating 30 to 40 women a week. So far, there has been little interest.

Dr Kees admits that he's reluctant to lose control of the project, to have bureaucrats complicate what he has simplified so successfully. "I can work with anybody," he says, adding ominously, "but on my terms." Until that time Dr Kees Waaldijk will continue his mission, a one-man aid operation which has no doubt changed for the better the lives of more women than many education initiatives by national and international organizations. "Everybody agrees that real progress is only possible by improving the position of the women in this world," he says. "My VVF-plan contributes to that. What are we waiting for?"

Liz Hunt is health editor of *The Independent* and *Independent on Sunday* newspapers, London, UK. Photographs by Petterik Wiggers, Amsterdam

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