national vvf report nigeria

evaluation report VIII

1995

reprint

Babbar Ruga Fistula Hospital
KATSINA

and

Laure Fistula Center
KANO

and

Jummai Fistula Center
SOKOTO

by

Kees WAALDIJK

reprint

sponsored and financed by:
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paris

national vvf project nigeria

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VVF-projects

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eighth evaluation report
VVF-projects KANO/KATSINA/SOKOTO

introduction

The obstetric fistula is a major public health problem for which a solution has not yet been found.

For instance in Katsina State some 700 tuberculosis patients, 600 VVF-patients and 450 leprosy patients were treated during 1995, all under supervision of the consultant who is i/c of the tuberculosis/VVF/leprosy care/control in the whole state. Like tuberculosis and leprosy it is a condition of the poor and underprivileged.

It has a tremendous impact upon the patients and the society because the society is ostracizing these unfortunate (mostly young) women depriving them from their right on a "normal" life within their own community.

At the moment there are some 1.5 to 2 million VVF-patients in Africa only, living as outcasts with a bleak outlook to the future as where should they go for treatment??

It cannot be stressed enough that we are running a public health programme which by its nature is a surgical programme: **public health surgery**. This means that we are looking forward to reach as many patients as possible and not overtreat the single individual patient. Our main aim is to have an impact upon an almost hopeless situation. Prevention will remain a utopia.

The expansion to SOKOTO seems to be a success.

Expansion to MARADI in Republique de Niger. At last negotiations have been finalized in a tripartite agreement between Katsina State of Nigeria with Maradi Department and Zinder Department of Republique de Niger to expand the programme to MARADI where we hope to start middle of January 1996.

The National Task Force on Vesicovaginal Fistula has fulfilled its task of creating the awareness needed. On its last meeting in LAGOS it was decided to transform it into a nongovernmental organization: National Foundation on Vesicovaginal Fistula. That will be the end of functioning as a task force!

Still there is a need for an International Obstetric Fistula Foundation!

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 just started.
These centers are capable of dealing with VVF as a public health problem within the three states.
However, there are 28 more states in the whole federation of Nigeria where not very much is being done, except for Akwa Ibom State where Dr Ann WARD is doing a fine job.

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**!

Considering the population explosion and the deterioration of health services, the incidence/prevalence of obstetric fistulas will increase during at least **fifty years coming** throughout Africa.

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 clinics thoughout Africa!!

short-term objectives

KATSINA

International training center:

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

For a smooth coordination we would like to liaise with WHO, UNDP, UNFPA and NTFVVF or any other big (inter)national organization.

The main problem is, we need an International Organization to sponsor the traveling/lodging/feeding of the trainees.

If the need arises, we have to build a hostel for them in KATSINA though at the moment there are excellent hotel facilities.

KANO

The new Amina SAMBO 20-bed postoperative ward is in full use contibuting to the well-being of the patients and to the smooth functioning of the operation programme.

As NEPA is unreliable there is need for a small 7.5 kVA standby generator for the theater to ensure that we can operate at all times. Otherwise the electric autoclave cannot be used for sterilizing.

A completely renovated operating table has been donated by the Soroptomist Club in LONDON, England, and has been installed in the theater.

SOKOTO

The first priority is to get a proper operating table as the present one is below any standards, even for the consultant who is used to very primitive conditions.

Then we urgently need a hostel of some 50 beds, otherwise the service will remain haphazard instead of organized and systematic.

MARADI

In November an orientation trip was made to MARADI by the consultant, the deputy surgeon and the theater nurse. It was decided to start January 1996.

In all centers KANO and KATSINA and SOKOTO there is an urgent need for 2 hydraulic high-quality operating tables; so six in total

activities

postgraduate training (see Annex I)

After many years of intensive training all types of health personnel in the management of VVF/RVF, we are now ready to to expand our services to other countries as the problem is all over Africa with 1.5-2 million VVF-patients waiting for surgery.

The training programme poses an enormous stress, as every quarter year some 3-4 new doctors are coming who have to be trained from scrap, even in basic surgical/anesthetic technics.
Also this training slows down the VVF-repair programme, as it takes fairly long for the trainees to master the history taking, vaginal examination, spinal anesthesia, surgery, postoperative care, counseling etc., and it **all takes time**.
Still it is of utmost importance to continue, as this information/expertise has to be brought to the places where it is needed.
Actually, all the residents in obstetrics/gynecology throughout Africa need ample exposure to the VVF-problem, and this should be part of their curriculum.

deputy surgeons
It is only by their dedicated efforts that the output could be increased by almost 20%!
In KANO Dr Iliyasu ZUBAIRU left for residency in ZARIA, where hopefully he will be the deputy surgeon once we start there in the near future.
Dr Idris S ABUBAKAR took over from him, and he is doing a fine job.

general doctors/senior registrars/visiting consultants
Sofar, a total of **61** doctors have been trained or attended our programmes in KANO and KATSINA and SOKOTO.
Dr Thomas JIP RAASSEN from AMREF visited us during September for a 14-day in-service training, and we wish him all the best in East Africa.

(theater) nurses
A total of **61** nurses from all over the Federation of Nigeria attended and completed the course(s).
Though the general training was stopped, the training of theater nurses has to be continued.

surgery (see Annex II)

Though it was thought that the maximum had been reached within the "primitive" conditions, the number of repairs could be **increased by almost 20%!!** after a "standstill" of two years.
In KANO we performed 373 VVF-repairs and 51 RVF-repairs and in KATSINA 537 VVF-repairs and 51 RVF-repairs whilst in SOKOTO 161 VVF-repairs and 11 RVF-repairs were performed making **a total of 1,184 VVF/RVF-repairs during 1995**.
Though we are very proud of this achievement, it is **not even up to 1% of what is really needed** considering the 1.5-2 million patients waiting.
Also it is not clear whether we shall be able to keep up the continuous increase in our performance. This will depend upon our financial resources.

research

generally
Almost all problems related to VVF-surgery have been solved except postoperative urge incontinence due to detrusor instability.

However, it seems that 2-3 out of 1,000 fistula patients are not operable under our conditions right from the beginning. They present with extensive fistula, subtotal bladder loss, narrow pubic angle and severe funnel-shape vagina stenosis. They need extensive reconstructive surgery, and unfortunately for these patients, they fall outside our basic **public health surgery** programme.

VVF-surgery

circumferential fistulas

Having started already in 1989 with the **circumferential repair**, this seems to be the theoretical and practical solution for these difficult fistulas. The principles are: a. **circumferential dissection** of the bladder from anterior vagina wall/pubic bones/symphysis/anterior abdominal wall, b. **advancement** of the bladder and c. **circumferential end-to-end vesicourethrostomy**.

It is remarkable how easy it can be performed via the **vagina** in the **exaggerated lithotomy position**. Specifically the outcome as to **continence** is far superior than with other technics.

corner-corner fistulas

It seems a solution has been found for this very difficult type of fistula though they remain troublesome to repair due to **excessive scarring**.

post-repair stress incontinence grade II-III

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.

Grading of postrepair stress incontinence from **I** (mild urine loss on standing up/cough) to **II** (leaking urine whilst standing/walking) to **III** (continuous leaking urine whilst lying/ sitting/standing/walking)

It cannot be stressed enough that preoperative examination to exclude any sign of detrusore instability is of utmost importance.

Also a dye test with at least 100 ml gentian violet has to be performed to exclude **minute** fistulas which seem to cause stress incontinence as well!

examination under anesthesia (EUA)

If one is in doubt at a normal vaginal examination about the operability it is better for him/her to refer the patient to a real fistula surgeon. There is no shame in referring a patient to someone more experienced.

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.

Why should the obstetric fistula be an exception to **basic surgical principles**?? with far reaching social implications!!

Already some **750 patients** have been treated with a **success rate of almost 95%!**

bulbocavernosus fat pad graft

Somehow the sealing off and continence are not related to this procedure.

urethra reconstruction

Everywhere it is recommended to reconstruct the urethra over a catheter but better adaptation is achieved if the urethra is reconstructed first before a catheter is inserted. The width of the neourethra is checked after each suture by a metal sound H8, and if the lumen is too narrow an anterior UV-tomy can be performed.

Many times the anterior vagina wall has to be reconstructed as well, e.g. by skin-mucosa rotation/advancement flap from either the R or the L labia. This full-thickness vascularized flap gives a good covering of the neourethra, and also improves the width/depth of a traumatized vagina.

micturition under supervision

One of the worst things is when patients with a VVF or post-repair incontinence stop drinking. Because then the chances are high that they develop a chronic cystitis (with eventually shrunken bladder!) and/or bladder stone.

Therefore they have to be retrained in drinking abundantly fluids to break through this vicious circle! Telling them is not enough so they have to be instructed under supervision to drink plenty and to pass urine frequently. Some 20% of the patients with severe incontinence do respond favourably to this programme once they understand its meaning.

RVF-surgery
Since serafit (a polyglycolic acid) was used instead of chromic catgut as suturing material, the success rate went up to over 85%.
In many patients a combined abdominovaginal approach seems to be indicated but poor postoperative nursing care does not allow any abdominal procedure.

suturing materials
Serafit is definitely superior to chromic catgut, but it is **too** expensive. Therefore we use it only on special indication: RVF-repair, difficult fixation of the bladder onto symphysis, corner-corner fistula and vaginal anterior colposuspension in stress incontinence. There are also some logistic problems as it is not available in cassettes of 90-100 meters like chromic catgut.

spinal anesthesia
Dr Said BABAYO conducted a study in 100 consecutive patients to finish his research project to become a consultant anesthetist.

external funds
It is only due to a grant from the Schumacher-Kramer Foundation in combination with the Foundation Tiel Tot Tropen that we are able to travel from KATSINA to KANO to SOKOTO 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.

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. Sokoto is the 3rd center in Northern Nigeria but it needs a lot of upgrading.
Time has come now to expand the programme, first to the other 28 States of (Northern) Nigeria and then to the rest of (West) Africa.
Hopefully, MARADI in Republique de Niger will be the start of an international programme.

P.S.
what about the rest of the 1,5-2 million VVF-patients in Africa?

an International Obstetric Fistula Foundation is long overdue!!!

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

annex I
list of trainees

deputy surgeons

Dr Idris S ABUBAKAR	Laure Fistula Center, KANO
Dr Jabir MOHAMMED	Babbar Ruga Fistula Hospital, KATSINA
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 Idris S. ABUBAKAR	Kano State
Dr Abdu ADO	Katsina State
Dr Mohammed I AHMAD	Jigawa State
Dr Said AHMED	Jigawa State
Dr Ebenezer APAKE	Taraba State
Dr Yusha'u ARMIYA'U	Katsina State
Dr Shehu BALA	Katsina State
Dr Bello Samaila CHAFE	Sokoto State
Dr Umaru DIKKO	Kano State
Dr Gyang DANTONG	Plateau State
Dr Bello I DOGONDAJI	Sokoto State
Dr James O. FAGBAYI	Kwara State
Dr Gabriel HARUNA	Kaduna State
Dr Saidu A. IBRAHIM	Jigawa 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	Sokoto 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 Aminu SAFANA	Katsina State
Dr Isah Ibrahim SHAFI'I	Kebbi State
Dr Aliyu SHETTIMA	Borno State
Dr (Mrs) Yalwa USMAN	Kano 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 John OKOYE	ENUGU

Dr Mansur Suleiman SADIQ	KANO
Dr Dapo SOTILOYE	ILORIN
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 Frits DRIESSEN	NIJMEGEN, Holland
Prof Dr Jelte DE HAAN	MAASTRICHT, Holland
Dr Vivian HIRDMAN	STOCKHOLM, Sweden
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

<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	
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	

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	

annex II

VVF/RVF-repairs in Laure/Babbar Ruga/Jummai Fistula Centers

	KANO		KATSINA		SOKOTO		
	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
total	1,980	198	4,335	328	203	11	**7,055**

total VVF-repairs and related operations: **6,518**

total RVF-repairs and related operations: **537**

total: 7,055

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

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

* sabbatical leave consultant for 6 mth

ELSEVIER

International Journal of Gynecology & Obstetrics 49 (1995) 161–163

International Journal of GYNECOLOGY & OBSTETRICS

Article

Surgical classification of obstetric fistulas

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Received 7 September 1994; revision received 10 January 1995; accepted 24 January 1995

Abstract

Objective: To develop a surgical classification for obstetric fistulas in order to compare surgical techniques and results. *Methods:* Based on a retrospective analysis of 775 consecutive fistula patients, the following classification is presented: (type I) fistulas not involving the urethral closing mechanism; (type II) fistulas involving the urethral closing mechanism; and (type III) ureter and other exceptional fistulas. Type II fistulas can be further divided into: (A) without (sub)total urethra involvement, and (B) with (sub)total urethra involvement; and (a) without a circumferential defect, and (b) with a circumferential defect. This classification was applied prospectively in over 2700 consecutive fistula patients. *Results:* The surgical technique becomes progressively more complicated from type I through type IIBb. The results of closure and continence worsen progressively from type I through type IIBb. Personal experience in the case of type III fistulas is very limited. *Conclusion:* This classification enables a systematic comparison of different surgical techniques and an objective evaluation of results from different centers.

Keywords: Obstetric fistula; Classification; Location; Operation; Prognosis; Vesicovaginal fistula

1. Introduction

The genitourinary fistula is far more prevalent than is generally known. It is estimated to occur in at least 50 000–100 000 new patients a year worldwide, the vast majority of them in the developing countries. As not all patients undergo surgery, there must be at least 1 000 000 fistula patients in need of operation; their actual number may well be over 2 000 000 [1].

Obstetric complications, due to the unavailability of obstetric care, constitute by far the main cause, accounting for more than 85% of fistulas. Since it will take a long time to set up a network of functioning obstetric units throughout rural areas, the obstetric fistula though preventable will remain a major public health problem for the coming 50 years. As such it will be a challenge to present and future generations of surgeons.

Proper classification is needed in order to systematically compare the different surgical techniques and objectively evaluate the results from different centers. Several classifications have been presented but all are based on the anatomic

0020-7292/95/$09.50
SSDI 0020-7292(95)02350-L

location of the fistula without surgical implications [2–5]. Based on a retrospective analysis of 775 consecutive fistula patients who underwent surgery by the author, a surgical/physiologic classification has been designed [6] and applied prospectively in over 2700 patients.

2. Materials and methods

The following classification of obstetric fistulas is presented according to their anatomic/physiologic location with regard to surgical technique and results (type I) fistulas not involving the closing mechanism; (type II) fistulas involving the closing mechanism; and (type III) ureter and other exceptional fistulas. Type II fistulas are further divided into: (A) without (sub)total urethra involvement, and (B) with (sub)total urethra involvement; and (a) without a circumferential defect, and (b) with a circumferential defect.

Of the 2700 consecutive patients prospectively classified in this way, 483 (17.9%) presented with type I, 1061 (39.3%) with type IIAa, 754 (27.9%) with type IIAb, 134 (5.0%) with type IIBa, 75 (2.8%) with type IIBb and 15 (0.6%) with type III. A further 178 (6.6%) presented with stress/urge/overflow incontinence either immediately postpartum or following fistula repair(s) elsewhere.

The classification was carried out under anesthetic just before the operation was begun.

Within this classification it is possible to further classify each fistula according to the size of the defect: small (<2 cm), medium (2–3 cm), large (4–5 cm) and extensive (≥6 cm).

2.1. Surgical technique

The surgical approach of choice in the majority of type I and type II fistulas is the transvaginal route, except in rare situations. A transabdominal approach is often chosen for type III fistulas. The anesthesia of choice in the developing countries is spinal anesthesia for types I and II. For type III other forms of anesthesia may be necessary.

The operation becomes progressively more and more complicated from type I through type IIBb. Type IIBb fistulas are the most difficult to repair since there is only scar tissue left for the reconstruction of the urethra.

In type I, closure of the fistula is sufficient, either longitudinal or transverse. If the patient was continent before she developed the fistula she will be continent again after successful fistula closure. In type IIAa fistulas, longitudinal closure is preferred, but it is only possible in some 15% of cases because of lateral edge scar retraction of the fistula. If indicated by urethral mobility an elevation of the bladder neck should be carried out.

In type IIAb fistulas an end-to-end vesicourethrostomy should be performed in order to restore the closing mechanism circumferentially. In type IIBa the urethra can be reconstructed from the available urethral tissue together with an elevation of the bladder neck if indicated. In type IIBb the urethra has to be reconstructed from other tissue, e.g. scar tissue, paraurethral structures or bladder tissue. In the fistulas with a circumferential defect, circumferential mobilization of the bladder from the anterior vaginal wall, pubic bones, symphysis and anterior abdominal musculature is necessary to perform a tension-free end-to-end vesicourethrostomy. The author's personal experience of type III fistulas is very limited. In this type an implantation of the ureters into the bladder is necessary, or urinary diversion.

3. Results

The results of fistula repair show diminishing closure rates and increasing postrepair incontinence rates as the fistula type increases progressively from type I through type IIBb [6].

The results of closure and continence at first attempt in the first 500 consecutive patients are given in Table 1. The results at first attempt in a further group of 150 type IIA(a+b) fistulas consecutively

Table 1
Results at first attempt in the first 500 patients

Type	*n*	Closure rate (%)	Incontinence rate (%)
I	156	141 (90.4)	2 (1.4)
IIA	288	255 (88.5)	37 (14.5)
IIB	56	43 (76.8)	9 (20.9)
Total	500	439 (87.8)	48 (10.9)

Table 2
Results at first attempt in a further 150 type IIA(a+b) fistulas

Type	*n*	Closure rate (%)	Incontinence rate (%)
IIAa	76	67 (88.2)	4 (6.0)
IIAb	74	61 (82.4)	11 (18.0)
Total	150	128 (85.3)	15 (11.7)

operated with an elevation of the bladder neck by a bulbocavernosus graft, are presented in Table 2.

4. Discussion

It is no surprise that the results of closure progressively worsen from type I through IIBb as the operation becomes progressively more difficult and complicated. Also in type II fistulas the thinner urethral tissue has to be used for (part of) the repair.

It is also no surprise that the results regarding continence progressively worsen from type I through type IIBb. In type I fistulas the closing mechanism is intact. In type II fistulas progressively more of the closing mechanism is partly or totally lost as the classification type increases. For a proper use of this classification, the typing of each fistula should be done under anesthesia at the beginning of the operation. It is important to look for a circumferential defect since it is common in obstetric fistulas, makes the operation more difficult, and worsens the prognosis as regards closure and continence. In addition the urethra is often blocked proximally and patency has to be restored by passing a metal sound transurethrally.

Of course it is also possible within this classification to further classify according to the size of the fistula. However the size of the fistula does not always represent the actual damage done. There are instances where the fistula is small but the tissue loss is such that it must be classified as extensive.

5. Conclusion

This classification will enable a systematic comparison of the different surgical techniques and an objective evaluation of the results from different centers. The anatomic/physiologic location of the fistula has consequences for the surgical technique and for the outcome of the repair. It must be borne in mind however that this article presents only the principles of classification and surgical approach, and that every fistula needs to be approached individually.

References

[1] Waaldijk K, Armiya'u YD. The obstetric fistula: a major public health problem still unsolved. Int Urogynecol J 1993; 4: 126–128.
[2] Chassar Moir J. The vesico-vaginal fistula. London: Baillière Tindall, 1961.
[3] Lawson JB. Birth canal injuries. Proc R Soc Med 1968; 61: 368–370.
[4] Hamlin RHJ, Nicholson EC. Reconstruction of urethra totally destroyed in labour. Br Med J 1969; 2: 147–150.
[5] Ward A. Genitourinary fistulae: a report on 1789 cases. In: Proceedings of the 2nd International Congress of Obstetrics and Gynecology, Lagos, 1980.
[6] Waaldijk K. The (surgical) management of bladder fistula in 775 women in Northern Nigeria [thesis]. Utrecht: Univ. of Utrecht, 1989.

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