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<b>Author 1</b>	EGWUATU, V.E
<b>Author 2</b>	AGUGUA, N.E.N-
<b>Author 3</b>	
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# Female Circumcision: Management of Urinary Complications

by N. E. N. AGUGUA, F.R.C.S., F.W.A.C.S., Lecturer and Consultant Paediatric Surgeon and V. E. EGWUATU, F.M.C.O.G. (Nig.), F.R.C.O.G., Senior Lecturer and Consultant Obstetrician and Gynaecologist  
*University of Nigeria Teaching Hospital, Enugu, Nigeria*

In spite of a wide geographical and racial distribution<sup>1,2,3</sup> and the continuing practice of the custom over several centuries,<sup>4</sup> female circumcision has attracted relatively little attention in the medical literature. Most of the agitation on the subject has come from feminist movements, which have concentrated on the social aspects of the custom. Diagnosis and management of complications of the operation have received little or no consideration. This apparent neglect may be related to the secret and ritualistic nature of the practice.

In Nigeria, circumcision of females varies among different tribal groups, the type of operation employed being determined by traditional and religious beliefs. In the Muslim North, the Sunna Circumcision being the variety advocated by most authorities on Islam, is popular. Among the mainly Christian and Animist Igbos of the South however, the procedure of choice is the Simple Excision, called "Ibe-Ugwu", in which the clitoris is excised, with or without the labia minora. Infibulation, or "Pharoanic Circumcision", which involves the removal of the clitoris, the labia minora and majora, with near obliteration of the introitus, is uncommon in Nigeria.

In a previous article<sup>5</sup> we presented details of the Simple Excision method as practised in Igboland of Nigeria. This paper discusses the management of urinary complications following the operation.

## Material and Methods

Between 1973 and 1981, 55 girls aged 12 years and under, and 18 adult females whose ages range between 14 and 31 years, attended the Paediatric and Gynaecological Out-Patient clinics of the University of Nigeria Teaching Hospital (UNTH), Enugu, with

post-circumcision complications. On account of its specialist nature, the UNTH attracts patients from all parts of Igbo land. The case records of the 73 patients were extracted, and the complications analysed.

## Results

Tables 1 and 2 show the complications of female circumcision in the 73 patients.

TABLE 1  
*Complications of circumcision, 55 paediatric patients*

Lesion	No. of patients	Percentage
Partial labial fusion	16	29.09
Implantation dermoid	14	25.46
Complete labial fusion	11	20.00
Meatal obstruction	3	5.46
Introital stenosis	2	3.64
Urethral stricture	2	3.64
Urinary infection	2	3.64
Haemorrhage	2	3.64
Recto-vaginal fistula	1	1.81
Septicaemia	1	1.81
Tetanus	1	1.81

TABLE 2  
*Complication of circumcision, 18 adult patients*

Lesion	No. of patients	Percentage
Partial vulval stenosis	11	61.1
Implantation dermoid	4	22.2
Meatal obstruction	2	11.1
Complete labial fusion	1	5.6

Twenty-one (28.8%) of these patients presented with lesions associated with urinary disturbances.

Of the presenting complaints as analysed in Table 3, which excludes the few cases of the life-threatening

*Address reprint requests to:*  
 Dr N E N Agugua  
 Department of Surgery  
 Children's Hospital  
 Ladywood, Middleway  
 Birmingham B16 8ET

**TABLE 3**  
*Presenting complaints following female circumcision in 58 patients*

Complaints	No. of patients	Percentage
Urinary	21	36.2
Cosmetic	18	31.0
Coital	11	19.0
Infertility	6	10.3
Difficult labour	2	3.5

complications like haemorrhage, septicaemia and tetanus, urinary symptoms (36.2%) were the commonest.

Table 4 shows the urinary complaints and the accompanying lesions.

**TABLE 4**  
*Urinary problems of female circumcision (21 patients)*

Clinical features	Lesion	Paediatric	Adult	Percentage
Dribbling incontinence	Complete labial fusion	11	1	57.2
Straining and retention of urine	Meatal obstruction and urethral stricture	3	—	14.3
		2	—	9.5
Pain on micturition	Urinary infection	2	—	9.5
Poor urinary flow	Meatal obstruction	—	2	9.5

**Diagnosis and Management**

The common presenting symptoms in the patients with urinary problems were:

- Dribbling Incontinence
- Straining and retention of urine
- Pain on micturition
- Poor urinary flow

Dribbling incontinence was the presenting symptom in 57.2% of patients. These included all cases of complete labial fusion. Meatal obstruction and urethral stricture were the lesions in 33.3% of patients and these patients complained of straining at micturition, retention of urine and poor urinary flow. 9.5% observed pain on micturition and were found to have urinary infection.

*Complete labial fusion*

The clinical history in the average patient commonly dates back to the healing of the circumcision by secondary intention. The patient usually presents with a mid-line scar tissue of varying width. There is often a pin-hole opening along the scar through which urine continuously dribbles. This opening is sometimes clinically undetectable (Fig. 1). Wetting of pants

is a feature which is very embarrassing to the older children. In adults, menstruation may be achieved through this hole. In this series, there was no case of haematocolpos as a result of complete labial fusion.

The investigations include a complete work-up of the urinary system. Pre-operative urinalysis, urine culture, serum urea and creatinine levels, and an intravenous pyelogram are obtained. The intravenous pyelogram is performed to exclude back-pressure effects on the kidneys and the bladder. Post-operatively, a cystoscopy will rule out any damage to the distal urinary system.

The treatment of complete labial fusion is always surgical, unlike that of the labial agglutination of infancy due to vulvo-vaginitis which responds to treatment with oestrogen. Under general anaesthesia, and in the lithotomy position, a probe is inserted through the pin-hole opening. An incision is made

along the probe, usually along the scar tissue, and this leads to a urine pouch, made up of the walls of the vagina, or the vestibule as a whole. On opening the pouch, the urethra is readily identified. A urinary catheter is inserted and retained in the bladder. Plastic reconstruction of the vulva and vestibule is achieved by re-epithelialisation of all the edges (Fig. 2). The catheter is retained for 5 days post-operatively to avoid soilage of the area. Skin sutures are removed when the wound is healed. Infection could be a post-operative problem but all our cases received prophylactic broad-spectrum antibiotic therapy. On separating the scar tissue in one instance, the edges of the vestibule were found to be so denuded that an epidermal skin graft was taken from the inner surface of the thigh to achieve re-epithelialisation.

*Meatal obstruction*

Patients in this group presented with straining at micturition, urinary retention or poor urinary flow. They were usually cases of meatal stenosis from meatitis, or meatal obstruction by a skin scab or tissue flap covering the urinary meatus. Inflammation of the meatus is treated with antibiotics after culturing a swab from the area and determining the sensitivity



FIG. 1. Shows complete labial fusion in a seven-year-old girl. Urination is by dribbling through an undetectable hole.

of the infecting organism. When a scab is obstructing the meatus, excision is the procedure. Post-operative cystoscopy is used to exclude injury to the distal urinary system.

#### *Urethral stricture*

Urethral stricture which is caused by inadvertent damage to the urethra during circumcision was not common in our series and was responsible for 9.5% of cases. Commonly, the symptoms are those of straining at micturition and retention of urine. Serial

bougination of the urethra was sufficient treatment in our cases. It is, however, feasible that urethroplasty may be required in severe strictures.

#### *Urinary infection*

Urinary infection, with no other evidence of damage to the urinary passages, usually occurs as a result of post-circumcision perineal sepsis. Prompt culture of the urine is essential. The sensitivity of the organism cultured is typed and a suitable antibiotic administered. *Escherichia coli* was cultured from the

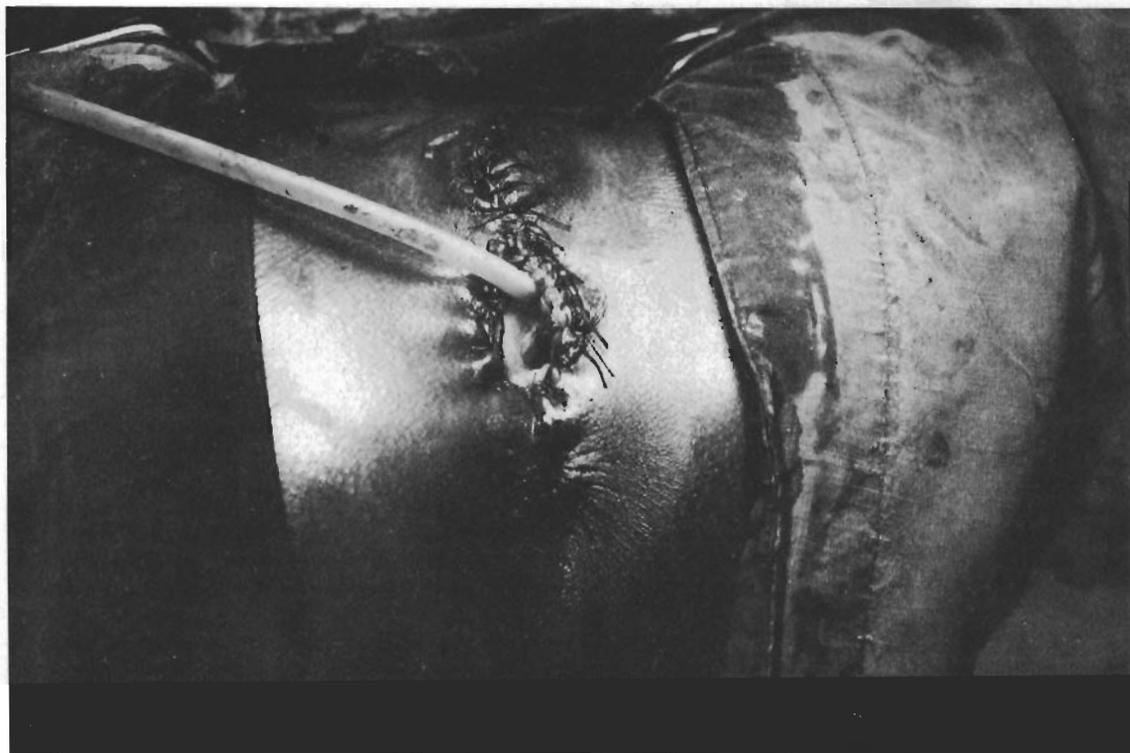


FIG. 2. The same patient as in Fig. 1 after operation. The catheter is in the urethra.

urine of our two cases, and this responded adequately to Ampiclox.

#### Comment

The finding in this study viz. that the commonest presenting complaints following female circumcision relate to micturition, is not surprising. The female external urinary meatus lies in close anatomical proximity to the major target of the mutilation, the clitoris. In our clinical experience, there are many more post-circumcision lesions of the female external urinary meatus which are, however, asymptomatic. These deformities range from prolapse of the urethral mucosa, to varying degrees of narrowing due to stenosis.

Urinary retention as an immediate complication of female circumcision occurs usually within 48 hours of the operation<sup>1,2</sup> and is more common after infibulation than shock and haemorrhage put together, but very rare with Sunna Circumcision.<sup>1</sup> In this study of simple excision we did not encounter retention of urine as an early complication, probably because such patients were adequately treated by the local rural medical units. This may also account for the unexpectedly few cases of urinary infection in the immediate post-circumcision period. Our cases of retention presented at 4 weeks after the operation for

meatal obstruction and at 1 year with urethral stricture.

More than half of our cases with urinary complaints were associated with complete labial fusion. The appearance of the vulva with its skin diaphragm, a midline raphe of scar tissue, and the presence of a small stump of tissue in place of the amputated clitoris (Fig. 3) may resemble intersex. With increasing prevalence of air travel between countries, clinicians, especially those unfamiliar with the practice of female circumcision, should be aware of such a possibility. In cases of doubt, digital examination of the vulval skin diaphragm may elicit a "hollow sensation", suggesting the presence of a vagina. Digital rectal examination is often helpful in locating a uterus.

#### Summary

Seventy-three paediatric and adult female patients presented with post-circumcision complications at the University of Nigeria Teaching Hospital, Enugu, within the 9-year period 1973 to 1981. Seventy-two patients were circumcised within 21 days of birth, and one patient in the seventh month of the first pregnancy. Analysis of the complications reveals that lesions associated with urinary problems were the commonest (28.8%). Of the urinary complications,

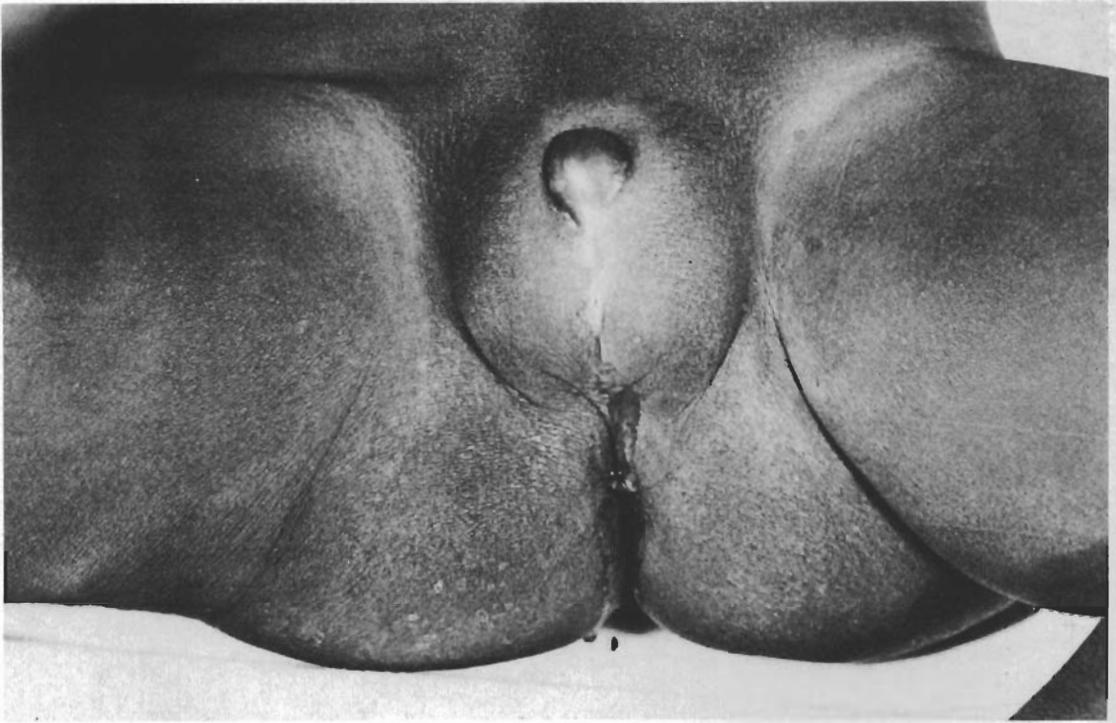


FIG. 3. Complete labial fusion in a 10-month-old baby with a clitoral stump simulating Intersexuality.

complete labial fusion contributed to 57.2%, while 23.8% of patients had meatal obstruction. Urinary infection and urethral stricture each accounted for 9.5% of patients. Diagnosis and management of the urinary complications are discussed.

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