

ook tereg opmerk, is die mediese vooruitgang van vandag die iatrogene siekte van môre. Daarom is die volgende waarskuwing (A. E. Schindler — persoonlike mededeling) na al die optimisme tog van kliniese belang: 'I think, therapy with anti-androgens has to be individualized and one must be aware that permanent cures will not be reached when the medication is discontinued'.

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Gangrene of the Penis after Circumcision

A Report of 3 Cases

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SUMMARY

Three patients with gangrene of the penis after Xhosa ritual tribal circumcision are reported. A review of complications which may follow circumcision is given.

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Circumcision is probably one of the most ancient of surgical operations. As well as being undertaken for medical indications,¹ it is also practised for ritual or religious reasons by many primitive tribes in Africa and Australia.

The Committee on the Fetus and the Newborn of the American Academy of Pediatrics have stated that there are no valid medical indications for circumcision in the neonatal period. However, many paediatric surgeons feel that neonatal circumcision should be performed when the foreskin opening is so narrow as to obstruct urination. Oster² found an incidence of phimosis of 8% in 6-7-

year-olds, but only 1% in 16-17-year-olds. The ills befalling the uncircumcised male are minor, and are strictly preventable with simple education by physicians and parents.³

The complications of circumcision may, however, be vast and even functionally irreparable, and are usually secondary to poor surgical techniques by inexperienced or poorly trained surgeons.³ Tribal ritual circumcision, however, takes pride of place in producing such surgical horrors as are demonstrated in the 3 cases reported.

CASE REPORTS

Case 1

An 18-year-old Black underwent a tribal circumcision and 10 days later presented with a painful, swollen penis. Examination revealed a well-nourished male with severe toxæmia. A strong pungent odour, typical of this condition, was present. The penis was swollen, discoloured and the glans was gangrenous. The base of the penis had a white, mottled appearance and an early demarcation line was evident. Sensation was markedly reduced. He could still urinate, with great pain, through the non-viable organ. The scrotum was normal, but bilateral, tender, inguinal

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lymph node enlargement was evident. A mixed growth of *Escherichia coli*, *Pseudomonas* and *Klebsiella* was obtained from a pus swab taken from the gangrenous area. Treatment consisted of suprapubic bladder drainage, antibiotic therapy and amputation at the base of the penis, after a definite demarcation line had developed. The functional result was poor after the operation. In spite of the mucocutaneous anastomosis of the urethra, repeated dilatations of the meatus were required owing to stenosis. Limited erection was, however, still possible in the remaining stump. Coitus was not possible and urination was frustrating owing to the difficulty in directing the stream. A few drops of urine inevitably ran down the scrotum on completion of urination.

Comment. This young Black male developed extensive gangrene involving the entire shaft of the penis, with associated toxæmia, requiring amputation at the base of the penis.

Case 2

A 20-year-old Black underwent a tribal circumcision 3 weeks prior to admission to hospital. On examination a pungent odour was present, associated with severe toxæmia and retention of urine. The entire shaft of the penis was mummified to the base and a clear demarcation line was present. There was bilateral inguinal lymphadenopathy but the scrotum was normal. Suprapubic bladder drainage was performed, followed by amputation at the base of the penis. Reconstruction of the penis was performed 1 year after the initial operation, using scrotal tissue and an inguinal skin flap. The act of urination was greatly improved, but no erection was possible as the newly formed tube contained no cavernous tissue.

Comment. This young Black male presented with mummification of the penis with a clear demarcation line after circumcision, which necessitated amputation of the penis and urinary diversion. Reconstruction of the penis 1 year later improved urination, but no sexual function was possible.

Case 3

A 21-year-old Black was admitted to hospital 3 weeks after a tribal circumcision. On examination he was acutely ill, toxic, anaemic and confused. Locally, extensive gangrene of the penis was associated with Fournier's gangrene of the scrotum (Fig. 1).



Fig. 1. Gangrene of the entire penis with associated extravasation of urine and Fournier's gangrene of the scrotum.

A full bladder was palpated and extravasation of urine was noticeable in the swollen scrotum. Extensive subcutaneous necrotizing suppuration had spread up the anterior abdominal wall to above the umbilicus. Blood culture of *E. coli* was positive. Treatment consisted of antibiotics, blood transfusions, suprapubic bladder drainage and wide drainage of the abdominal wall abscesses. Amputation of the penis was performed in conjunction with local debridement of the scrotal gangrene. The patient was hospitalized for 3 months. A poor functional result was obtained owing to the extensive necrotizing process. After debridement, the scrotum healed uneventfully and a good result was achieved. A revision of the urethral meatal opening was indicated because of retraction and stenosis.

Comment. This is an extreme example of gangrene of the penis following tribal circumcision associated with retention and extravasation of urine, Fournier's gangrene of the scrotum and an extensive necrotizing suppurative process of the anterior abdominal wall, similar to Meleney's gangrene.

DISCUSSION

Gangrene is a term which denotes necrosis of tissue with superadded putrefaction.⁴ A variety of gangrenous lesions is well known and includes dry, wet, Meleney's postoperative synergistic and Fournier's gangrene.^{5,6}

A formidable list of complications, of which haemorrhage due to poor haemostasis is the most common, may follow circumcision. Wound infection is fairly common, but is usually mild in nature. Retention of urine, ulceration, suppuration and partial necrosis of the penis may occur.^{1,7,8} Staphylococcal septicaemia and tetanus have been reported after circumcision and so has accidental laceration of the penile skin and scrotum.^{1,9} Incomplete circumcision, injury to the glans, lymphoedema of the penile skin, formation of preputial cysts, and urethral fistula formation after the use of plastic bell devices have been documented.^{1,10,11} Gross infection may lead to necrosis of the penis, as in the 3 cases presented, and the condition is frequently seen in some areas of the Republic of South Africa, where tribal ritual circumcision is practised; the end-results appear frequently in the mission hospitals of the Ciskei and Transkei.

Treatment in the less severe cases usually consists of regular dressings and antibiotic therapy administered on an outpatient basis. Debridement, skin grafting, amputation in association with urinary diversion, and eventual reconstructive surgery, may all be indicated in gross infection or gangrene, as illustrated in the cases described.

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