

# Injuries to the Skin of the Male External Genitalia in Southern Africa

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## SUMMARY

The more common injuries to the skin of the male external genital organs are described; some of these mutilations are unique to the African continent.

The extent of trauma ranges from small penile skin defects after circumcision to complete avulsion of the skin of the penis and scrotum. The techniques of reconstruction are described.

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The external genital organs in the male are exposed and vulnerable to injury, and the plastic surgeon frequently has to deal with skin injuries to this region.

Much has been written in the literature about traumatic denudation, and as early as 1855, Gibbs<sup>1</sup> reported a case of complete avulsion of the skin of the penis and scrotum. In 1942, Owens<sup>2</sup> reviewed the literature and found 13 cases of avulsion of the skin of both the penis and scrotum described. Since then, however, there has been a rapid increase in the number of cases reported, probably as a result of the increased use of machinery. By 1949, Baxter<sup>3</sup> had collected over 50 cases.

Industrial accidents account for some of these injuries. In factories the machinery is usually covered, however, and the worker is shielded, where possible, from all moving parts. By far the greatest factor in the increase of these avulsions is the more widespread use of farm machinery. The usual story is one of a farm labourer getting his trousers caught in the revolving shaft of a harvester or other moving farm machinery. The trousers are twisted or wound up and the man is pulled closer into the machine until the genital skin is caught and torn away from him along with his trousers. These injuries are relatively common in the grain-producing areas, and since 1961, the author has dealt with 11 cases of complete avulsion of the skin of the penis and the scrotum.

## HISTORY

Before dealing with these severe avulsions, I wish to mention a few other injuries to the male genitals which are of historic interest and which are unique to the African continent.

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Descriptions of mutilation to the genital organs exist which date back to a time long before Van Riebeeck, when early voyagers round the Cape met the Hottentots, an indigenous group who roamed the countryside around Table Mountain. These descriptions, although sometimes rather crude, make fascinating reading.

## THE HOTTENTOTS

Vasco da Gama, going ashore near Table Mountain, captured one of these people in 1497. After giving him some trifles, he freed the man and later met and bartered with a number of his fellows. He found them unfriendly and frightened, however, and in a skirmish, one of the Hottentots was killed with a crossbow. After Da Gama, many of the ships rounding the Cape stopped to barter for cattle. This remained hazardous, however, and Antonio de Saldanha, who incidentally was the first European man to have climbed Table Mountain, was nearly killed in 1503 when he was ambushed by about 200 Hottentots. He escaped with a serious wound to his arm. Some 7 years later a countryman of De Saldanha, Francisco d'Almeida, who was similarly attacked, was killed by the Hottentots.

In a *Joernaal* of the voyage of Cornelis de Houtman (1595),<sup>4,5</sup> the impressions of other voyagers round the Cape are summed up in the following description of the Hottentots: 'They are short in stature, ugly of face, their hair on their head often looking as if singed off by the sun. They go quite naked but for the tail of some wild animal before their privities, which are little covered by it. Also the skin of a wild beast hung around their necks, which on the outside has the hair still on it. In place of shoes they have two double pieces of leather under their feet. They have very neat weapons, shaped like a spear, an inch thick, eight or nine feet long, with iron points and some without. Indeed it looked as if they would have eaten some of us since they made little ado of eating raw guts, from which they had a little scraped out the dung with a finger. Their speech is like the clucking of turkeys.'

Jean-Baptiste Tavernier added about their speech: 'When they speak they fart with their tongues in their mouths, yet, although their speech is without separation of word for word, they understand each other readily.' The manner of speech with clicks and clacking sounds was the reason why the Dutch gave them the name of Hottentot or *Hüttentüt*, this being a term applied to one who stammers and stutters. Sir Edward Michelborne concluded in 1605: 'Tis a goodly country inhabited by the most savage and beastly people as ever I think God created.'

And now the reason for painting this picture of the first Capetonians; early voyagers noted that the Hottentots removed the right testicle of a child at birth. Nicholas Withington (1612) remarks that 'some of the Hottentots have two testicles, but those [were] the baser and (as the one stoned gallants affirmed to me) who were slaves, the others marked with this note of Gentry'. The reason for removing the testicle was not known, but most voyagers thought this was due to a superstition that the operation would make the child a fast runner when he grew up. Debeaulieu (1620) states: 'I have not been able to know for what reason or superstition, unless it is to run the better, and in truth they surpass all others that I have ever seen, and I believe it will be hard to catch them unless one were well mounted.'

Thomas Herbert (1627) writes: 'Most have but one stone, the other is forced away in their infancy—the female sex are for the greater part excised in their hidden parts, but the men know no such custom, for in place of circumcision, they pull away one stone, fearing to beget too many children.' Jean-Baptiste Tavernier (1649) also comments on this custom and states: 'As soon as a male child is born the mother cuts away his right testicle, and gives him seawater to drink and tobacco to chew. This right testicle is removed since they say it makes him speedier in running, some among them can overtake Roebucks. I was inquisitive enough to touch many of them and found nothing on them but the left testicle.'

By the end of the seventeenth century, the Hottentots were accustomed to White visitors and in fact, as Patrick Copland, in a description of their clothing, says: 'The woman's habit is as the men's. They were shamefaced at first; but at our return homewards they would lift up their ratskinnes and show their privities.' This probably marked the beginning of the end of the Hottentot race!

## THE BANTU

Early voyagers round the Cape noted that the Hottentots were uncircumcised. Among the Blacks of Southern Africa, however, many tribes have initiation rites involving circumcision, which can in some instances lead to mutilation of the genital organs.<sup>6-12</sup>

The male initiation ceremony is the most important epoch in the life of the Xhosa — it marks his transition from childhood to manhood. From this ceremony he must emerge a man bereft of all signs of immaturity. During the process of the ceremony he is taught the inner mysteries of Xhosa laws and customs. He is expected to conform, after completion of the ceremony, to the ideal man, for this is his second birth. In his culture there is an implicit concept of three birth processes: the first birth into the world as an infant; the second, the symbolic birth into manhood by the *abakhwetha* ceremony; the third is birth into the spiritual world by means of death.<sup>8</sup>

The initiation ceremony is held in autumn and in spring, and the youth is usually between 18 and 26 years old. *Umkhwetha* is the name employed for the boy while he is still in the process of undergoing the ceremony; the

plural is *abakhwetha*. The length of duration of the ceremony varies from 3 to 12 months. One man is appointed to act as father to the *abakhwetha*. He is called the *umninisuthu* and is in sole control of the boys going through the ceremony, aided by the *amakhankatha* (guards or instructors), who care for the initiates, guard them, dress their wounds, and teach them the laws and customs as well as the lessons of manhood.

A day or two before the circumcision rite, a special hut is built from flexible sticks and poles, and once the initiation hut is finished, a goat is killed and this is a sacrifice asking for blessings for the *abakhwetha*. While the goat is killed, all the hair is shaved from the *umkhwetha's* body. The boys then go down to the river where they wash themselves and confess all their previous misdeeds.

A leather belt to support the circumcised penis is placed around the waist, a cowhair necklace (*ubulunga*) is placed around the neck, and the boy dons a new sheepskin kaross. The *abakhwetha* then sit in a certain order in a row, each

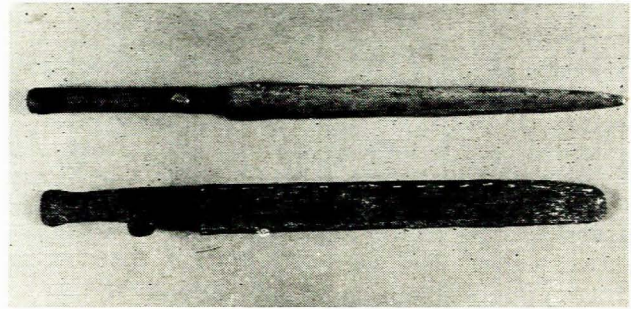


Fig. 1. Shortened assegai and sheath as used by the *incibi* during the circumcision ceremony.

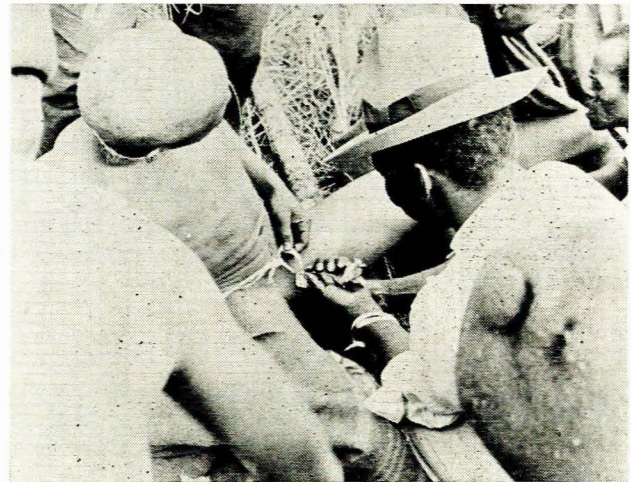


Fig. 2. The *incibi* (with hat) has amputated the prepuce and now, aided by the *amakhankatha*, applies dressings of the *ishwadi* bulb to the penis. Note leather thong to support the circumcised penis and the *ubulunga*. (This cowhair necklace is not only a charm against evil, but since it comes from the cow, the emblem of purity, is believed to bring health, virility and potency.)

in his kaross and the *incibi*, or operator, more commonly known as the expert, suddenly makes his appearance. The *incibi* must be a man of excellent character and respected by the people. Before a man is elected as an *incibi*, inquiries are made as to the results of his previous circumcisions; whether the men are alive, the state of their health, and whether they have become good law-abiding citizens. Should any of them have been to prison or be vagrants or tramps, such a one is not given the post.

The *incibi* now takes the prepuce of the first boy in his left hand while the boy sits in his kaross with his legs apart and with a to-and-fro movement of his special shortened assegai (Fig. 1) he amputates the prepuce. During this operation the boy is under constant scrutinising observation for the slightest movement of limbs and facial expression. If he shows signs of fear before the *incibi* operates, in the form of nervous movements, he is thrown out and must wait another year. As soon as the prepuce is severed, the *incibi* says, 'Yithi uyindoda' ('Say you are a man'), and the *umkhwetha* answers 'Ndiyindoda' ('I am a man'). The *incibi* wipes the assegai on the boy's kaross and hands him his prepuce which he promptly ties inside his kaross.

The *amakhankatha* then apply the dressings of the *ishwadi* bulb, an onion-like plant common in the Eastern Cape (Fig. 2). Each boy is shown his particular sleeping place, which he is not allowed to change. A short while after the first dressing, a second dressing is applied, during which the wounds are carefully inspected. If anyone is not properly circumcised, the operation is repeated. Hereafter the wounds are dressed at frequent intervals.

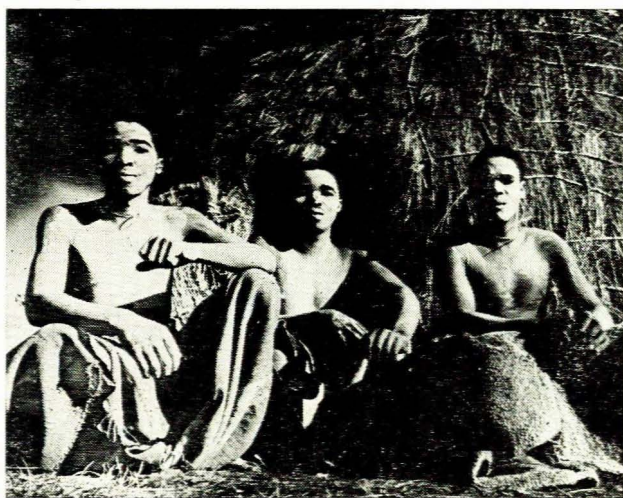


Fig. 3. *Abakhwetha* decorated with white clay in front of initiation hut.

After a lapse of some days, the bodies of the *abakhwetha* are decorated with white clay (Fig. 3). The whiteness is symbolic of purity and the performance of this toilet is a daily task. Finally, after 3-6 months, a purification rite is performed in the river. The fathers present their sons with new white blankets and the initiation hut is set

on fire, burning all the possessions of this period, including the kaross with the prepuce. This symbolises the end of boyhood and immaturity.

The above circumcision rite is carried out in the rural territories where tribal laws and traditions hold sway, but a modified form of circumcision rite is performed in all urban areas and town locations. With these tribes it is a sign of inferiority to be uncircumcised. The ceremony is spoken of as 'I was made a man', and the uncircumcised adult is treated as if he has not truly attained manhood. He is regarded as a coward, subjected to the ridicule of other men in public, prevented from speaking at village councils and from sitting with the men at meetings and rejected with scorn by the women.

There is much speculation as to the origin of the rite of circumcision among the Black peoples. Hebrews and Muslims circumcise; among the Arabs as long ago as 342 BC, evidence of this practice has been found, and this antedates the coming of Mohammed by many centuries. It is possible that the Blacks adopted the custom from the Arabs,<sup>7</sup> who from very early times had trading stations all along the shores of the Indian Ocean, where it meets the East Coast of Africa. It may be assumed that such Black tribes as have embraced the custom of circumcision have had an East Coast connection.

It is also possible<sup>7</sup> that circumcision came through Hamitic sources to the Blacks, since they are of Hamitic origin in part, but in that case, it would be natural to expect the custom to be universal among Blacks, which it is not. The custom has been passed on to the neighbouring tribes from the Xhosa. The Thembu, Mfengu and Bomvana, neighbours of the Xhosa, all circumcise. Some tribes such as the Mpondo and others, as well as many Natal tribes, do not observe the custom.

The circumcision rite described above does not always run according to plan. When the hand of the *incibi* is unsteady or inexperienced, or more likely when the initiate does not show the required fortitude, or jerks back or moves, too much skin may be excised, leaving the *umkhwetha* with a skin deficiency on the penis and a raw wound which soon becomes infected (Fig. 4). These men eventually seek medical treatment. Apart from the more common skin defects of the penis, an infected gangrene of the distal skin is occasionally observed, and here an occlusal *ishwadi* dressing which was too tight may have been the cause.

In the surgical treatment of these circumcision injuries, all necrotic tissue is first excised, and the defect then repaired with a skin graft which is applied and immobilised as illustrated in Fig. 5.

## WHITES

### Circumcision

Accidents occur occasionally during circumcision in Whites when too much skin is inadvertently removed;<sup>13-14</sup> sometimes even the distal urethra is damaged.

Fig. 6 illustrates the so-called 'hidden penis' which follows too drastic a circumcision.<sup>14</sup>

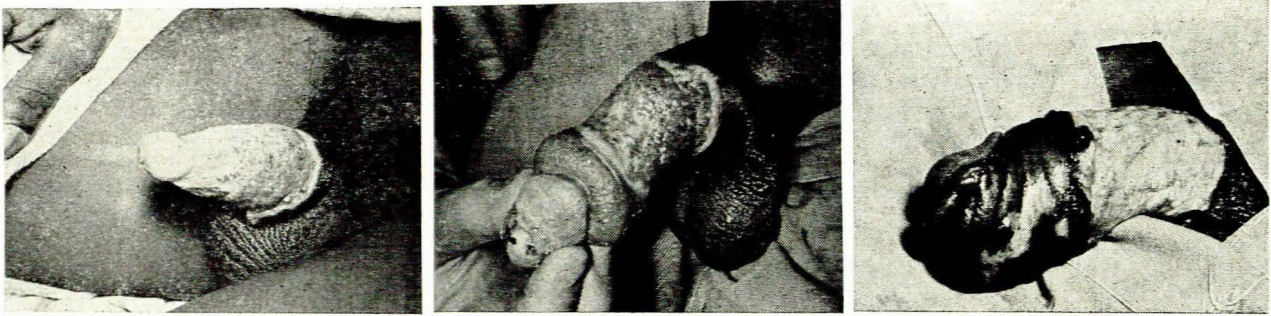


Fig. 4. Three initiates who have sought medical treatment after too radical a skin removal during ritual circumcision. Left: all the skin, apart from the preputial lining, has been amputated, leaving an infected, raw and granulating penis. Centre: in this case, the glans penis has also been injured. Right: here the distal skin, partially amputated, has become gangrenous.

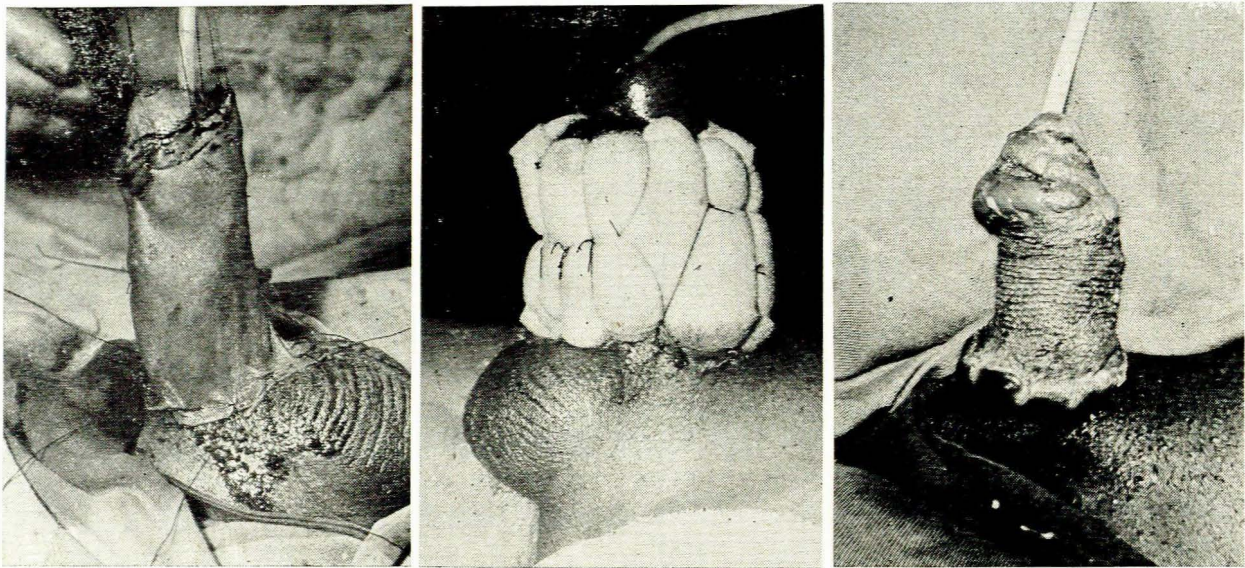


Fig. 5. After excision of all necrotic tissue, a rather thick partial thickness skin graft is applied to the defect (left) and immobilised with a 'tie-over' plastic foam dressing soaked in flavine (centre). This dressing can be removed after one week. Note perfect take (right).

## Avulsion Injuries

A more severe injury occurs when the skin of the penis or scrotum is accidentally avulsed. This is due to the fact that the skin of this area is attached to the underlying testes and penis by very loose areolar tissue, and is easily avulsed. When the prepuce is gripped and pulled away, the skin tears cleanly from the underlying penis. The testes are seldom avulsed as well, since at the moment of trauma, there is an immediate violent contraction of the cremasteric muscles, pulling them away from the skin. The plane of cleavage is just superficial to the cremaster, and the testicles escape major damage. These patients are usually shocked on admission due to blood loss and severe pain. There is the added psychological shock of so gross an injury to the genital organs.

## OPERATIONS

Cover for the denuded area should be provided as soon as possible. The aim must be to replace the denuded area with skin which is soft, flexible and loose, and which bears normal sensation so that sexual function is restored to normal. Ideally the repair should be done in one stage.

### The Penis

As far as skin cover for the penis is concerned, immediate Thiersch grafting gives excellent results. Whereas skin grafts in other body areas take quite some time to settle in, it is a fact that a skin graft on the penis becomes soft and flexible within a remarkably short time; it seems to take on the character of normal penile skin. There is

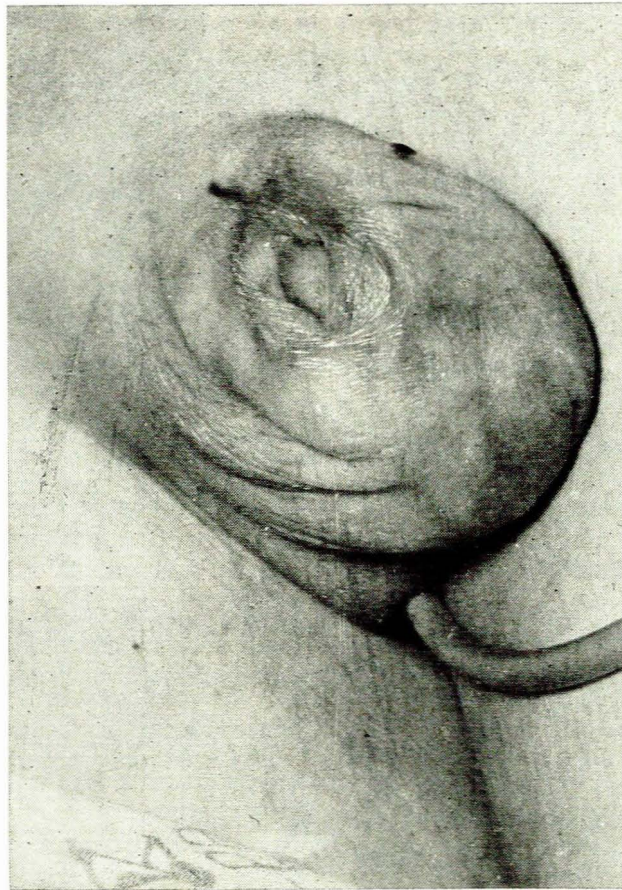


Fig. 6. White child with so-called 'hidden penis' after too drastic a circumcision.

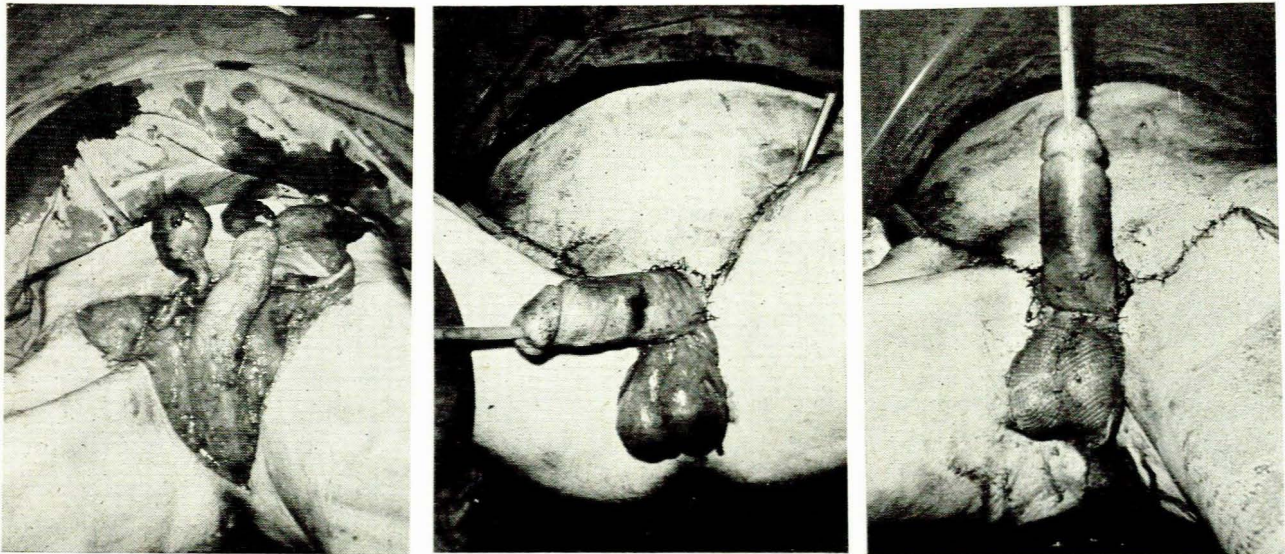
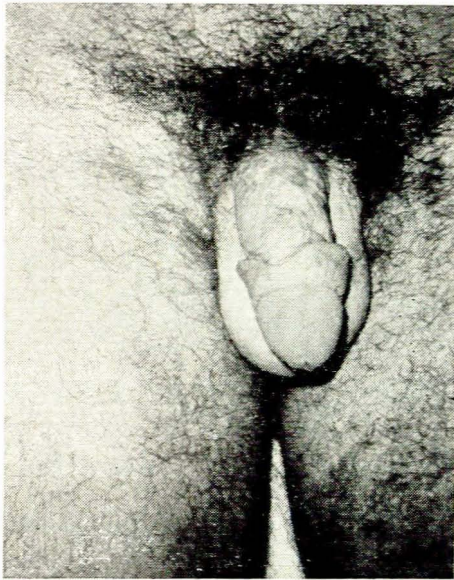
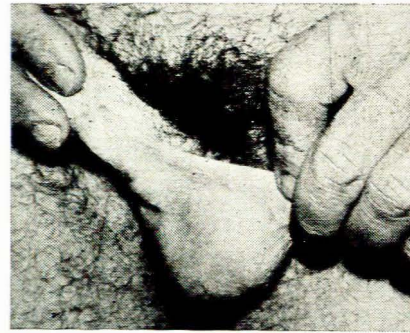


Fig. 7. Severe total traumatic avulsion of penile skin and scrotum in a White farmer— one-stage reconstruction. Left: state of wound after initial debridement and removal of oil and grass. Centre: testes carefully sutured together in anatomical position with fine interrupted Dexon sutures. Other wounds closed with silk sutures. Partially avulsed penile skin sutured back into position. Right: testes covered with skin graft. At this stage, proximal penile skin obviously devitalised. This was then removed and the penis also skin-grafted. Tie-over, flavine-soaked plastic foam dressings applied.



**Fig. 8. Postoperative result. Note soft and pliable skin on both penis and scrotum. The testes are hanging in normal anatomical position; there is a cremasteric reflex and the cosmetic appearance is quite acceptable.**



**Fig. 9. Postoperative result as in Fig. 8.**

skin and scrotum, was treated by covering the penis with a skin graft and burying the testes in the groins as an emergency procedure. At a later stage the scrotum was reconstructed by freeing the testes, carefully suturing them together with fine interrupted catgut stitches and then covering them with a skin graft. Since this produced a quite acceptable scrotum, subsequent cases of complete avulsion of penile skin and scrotum have been reconstructed with a one-stage skin grafting procedure as illustrated in Fig. 7. The results have been most gratifying. Like the penile skin, the newly constructed scrotum becomes soft and pliable and is a much more acceptable substitute for the original scrotal skin than any flap repair. The testes hang in the anatomical position, there is a normal cremasteric reflex and the cosmetic appearance is quite acceptable (Figs 8 and 9).

little tendency to contracture in this area, especially if one large, rather thick, graft is used with the line of suture placed on the dorsal surface. When there is a good primary take of the graft, the end result is very satisfactory, both functionally and cosmetically. The skin ultimately develops normal sensation, is soft and pliable, and does not hinder erection.

### The Scrotum

There used to be much divergence of opinion regarding repair of the scrotal loss, and a multitude of flap repairs have been described for the reconstruction of the new scrotum.

The first case seen by the author in Cape Town in 1961, a Black man with a complete avulsion of penile

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