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Machinery penile injuries associated with traditional trousers of the Yoruba of South-western Nigeria: A consideration for proper work clothes

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Garments**Abstract**

Appropriateness of garments for different vocations to avoid unintended injury to the worker has always been recognized. This report of two cases of machinery penile injuries in patients wearing the traditional trousers of the Yoruba tribe of south-western Nigeria emphasizes the need for wearing appropriate clothes when operating machines.

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Introduction

Despite the fact that the penis is well hidden by trousers or pants, and protected by the thighs, it is sometimes injured. Penile injury, apart from physical damage to the organ, also causes emotional trauma,

obviously related to the sexual function of the penis. Dressing is part of culture the world over, and a people are known by their mode of dressings which, apart from being fashion-related, also helps to protect the body from harm. Trousers serve to cover a man's nakedness and to protect the genital organs. The apparel worn is specific for different occasions and activities. Hence, specific uniforms which are appropriate for different vocations are recognized. The need for appropriate work clothes for machinery operators is well recognized, because many injuries, including the loss of life, have been reported among machine operators wearing loose garments [1]. The Occupational Safety and Health Acts (OSHA) also specify appropriate garments in work places [2]. This fact is reinforced by these two case reports of injuries related to the traditional trousers of the Yoruba tribe of the south-western part of Nigeria. These trousers are usually made from different cotton materials. One important feature of the trousers is that the waist-band is loosely sewn and can be made to fit varying waist circumferences. It has a draw-string which is fastened in front to make the trousers fit the waist of the man. The draw-string is usually longer than the waist circumference and the

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excess length usually dangles between the thighs, if not tucked into the trousers. This dangling draw-string may be caught in moving machinery parts, pulling in the trousers and leading to injury. We present two case reports to highlight this mechanism of penile injury.

Case 1

A 17-year-old man working as a casual worker in a bakery presented a few hours after having his phallus injured by the electric rolling pin machine in the bakery. At the time of the injury the patient wore a vest and a pair of traditional Yoruba trousers. The draw-string of the trousers was caught by the roller and the trousers and the penis were drawn into the roller before the power supply to the roller was switched off by a fellow worker. The patient's trousers and the penis had to be disengaged from the roller. The patient bled per urethram and was in acute urinary retention. Examination revealed a swollen phallus with ragged skin lacerations. There was bleeding per urethram and from several penile skin lacerations.

The patient was treated with analgesics, anti-tetanus prophylaxis, penile dressings and suprapubic cystostomy. After about 4 weeks on suprapubic catheter drainage, he attempted to void per urethram and this revealed a urethro-cutaneous fistula on the ventral surface of the mid-penile shaft. The wound was dressed and the patient had antibiotics and analgesics for about 2 weeks. The penile wound healed with a residual urethro-cutaneous fistula, but retained good penile erection. He was discharged to return for repair of the urethro-cutaneous fistula, but was lost to follow up.

Case 2

A 6-year-old boy presented to the accident and emergency unit after sustaining injury to the phallus. The patient was wearing a pair of Yoruba trousers while standing close to his mother's grinding machine. The string of the trousers was caught by the flywheel of the grinding machine, with subsequent involvement of the trousers and the phallus. The machine was switched off and the patient was disengaged from the machine.

On examination there was almost complete de-gloving of the uncircumcised penis from its base, but the penile skin remained attached



Figure 1 Degloved penis.



Figure 2 Sutured penile laceration.

to the glans and the underlying fascia (Fig. 1). Bleeding had reduced significantly at presentation. There was no injury to the scrotum nor other parts of the body. The patient passed urine freely, but had initial macroscopic hematuria. He subsequently passed clear urine. The penile wound was washed thoroughly with saline and was subsequently sutured (Fig. 2). The wound was inspected after 2 days and the skin remained viable. The patient's mother took the child away after a few days in hospital.



Figure 3 Traditional Yoruba trousers (with the the draw-string dangling).

Discussion

Injury to the penis is relatively uncommon, but several reports of penile injuries related to machinery accidents have been reported [3–5]. Injuries occurring because of the form or type of dressing have been reported to result in grave injuries to the patient [1]. Trousers which are meant to provide covering and protection of the male genitalia have also been a source of injury to the genitalia. Injuries from trouser zippers have been reported to cause injury to the genitalia [6,7]. The draw-string of the Yoruba native trousers which usually flies in front of the groin/thighs is a typical feature of the trousers (Fig. 3). The trousers are usually worn to social events, but may become work clothing for men operating machines. As illustrated by the case reports, the Yoruba trousers should not be worn in the vicinity of machines with open moving parts.

Genital injuries caused by trouser zippers usually involve the penis rather than the scrotum, because the scrotum presents a wider surface area to the back of the zipper. The type of injury reported in this paper involves the phallus more often, because it is more pendulous than the scrotum and is more easily entangled in moving machinery parts.

The penis has a dual blood supply and it is therefore not surprising that in the two cases described it remained viable with varying degrees of injury. The penile skin which was avulsed by the grinding machine remained viable despite almost complete avulsion from the penile shaft.

Conclusion

Work safety rules should be applied in the formal as well as the informal sector where machines are operated. Men everywhere should wear appropriate work clothes, especially if operating a machine. Prompt attention to penile injury will always be rewarding [1].

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