SCROTAL RECONSTRUCTION BY BILATERAL GRACILIS MYOCUTANEOUS FLAPS

RAHUL SAHAI, SHRISH H. SRIVASTAVA

SUMMARY

Primary Reconstruction of Scrotum by bilateral Gracilis myocutaneous flap is presented. A superior result aesthetically with better psychological satisfaction was noticed in a case of total loss of Scrotal skin by this procedure.

Total loss of Scrotal skin, in avulsion injuries is a challenging reconstructive problem. This paper deals with total reconstruction of Scrotum by Gracilis myocutaneous flaps.

Case History

A twelve year old boy sustained avulsion injury of the scrotum by the rotating bar of a machine. There was a complete loss of the Scrotal and the penile skin, but the prepuce was intact. He was admitted to the hospital, 4 hours after his injury. After treating the neurogenic shock by conservative means he was operated within two hours of his admission. Bilateral Gracilis island myocutaneous pedicled flaps based on medial circumflex femoral artery were used to cover the exposed testicles. Penile shaft was covered by retracting the residual preputial skin and covering the remaining raw area with split thickness skin graft. Skin grafted area required pressure bolus dressing with Foley’s catheter which was kept in place for two weeks. Secondary defect on the thighs was covered by split thickness skin graft after minimising the defect by local mobilization of the skin edges. The post-operative phase was uneventful except some superficial necrosis of one of the flap margins which epithelialised without any secondary grafting. The patient was discharged from the hospital on the 16th day with good result.

Discussion

Total reconstruction of the scrotum is a difficult surgical problem. To have a scrotum is a great satisfaction to the patient and its absence leads to psychological trauma (Baxter et al., 1949 and Millard, 1966).

Hence its reconstruction is indicated not only in avulsion injuries, but in injuries where both testicles are also damaged (purely for psychological reasons).

Split thickness graft is recommended both as primary and delayed treatment for resurfacing the exposed testicles in these injuries. Technical difficulties in fixing the grafts (Millard, 1966 and Scot & McDougaz, 1983), maintenance of graft position, infection, haematoma and in-advvisability to apply pressure over the testicles (May Hans, 1950) for graft fixation are the common problems faced in the procedure. Besides this exposed vas and the neurovascular bundle of testicles rule out direct graft fixation on them. 25% to 50% contraction of the graft, lack of normal colour, contour, flexibility and lack of sensations are other disadvantages of split thickness skin grafting on the exposed testicles (Charler et al., 1977).
Scrotal reconstruction by gracilis myocutaneous flaps

Fig 1. Pre-operative photograph showing the loss of scrotal and penile skin.

Fig 2. Eighth post-operative day photograph showing superficial necrosis of the skin of some part of left Gracilis myocutaneous flap.

Burining the testicle in the subcutaneous pocket of the thigh is believed to be one of the oldest method of management of avulsion injuries of the scrotum. But this method has its own draw-
backs, like implanted testicles are more prone to trauma (May Hans, 1950) and absence of scrotum may lead to psychological feeling of sexual inadequacy and inferiority complex (Charler et al., 1977).

Total reconstruction of scrotum by different thigh flaps is known. Commonly it is done as a staged procedure requiring multiple delays of the thigh flaps. One stage reconstruction of the scrotum by thigh flaps has also been done (Douglas, 1931, Hirshowitz 1980, Tiwari et al., 1980). Superiorly (Tiwari et al., 1980), laterally, superiolaterally (Scot & McDougaz, 1983) and post-

![Post-operative photograph of total reconstruction of the scrotum by bilateral Gracilis myocutaneous flaps.](image)

teriorly (Douglas, 1931) based thigh flaps, have been used to reconstruct the scrotum. Preservation of the sensory nerves of the medial thigh adds another advantage of having sensation in the reconstructed scrotum (Hirshoentitz, 1980, Tiwari et al., 1980). Tailoring cock ball thigh flaps around previously implanted testicles are also known (Millard, 1966).

Bilateral Gracilis myocutaneous flaps for the scrotal reconstruction has advantages over the other procedures. This is a reliable flap which can be used as a single staged procedure with preservation of the sensory nerves. Cosmetically it gives an excellent, well suspended, normal looking scrotal sacs. The colour contour, malleability and the texture of the reconstructed scrotum is better than what is achieved by other methods of reconstruction. The patient is highly satisfied with the final result. As far as the temperature part of the scrotum for its physiological activity is concerned, we feel that the temperature should not remain raised as the sacs are well suspended with a single muscle covering the testicles.

**Conclusions**

Seeing the results, we are confident that it is a good method of reconstruction. It can be used as a method of choice in scrotal reconstruction in cases of sex conversions in scrotal agenesis, in
injuries where both the testicles are also damaged, in Fournier's gangrene and in carcinoma scrotum where total amputation has been done.

REFERENCES


The Author

Dr. Rahul Sahai, M.S. M.Ch., Assistant Professor of Plastic Surgery, Medical College, Baroda.

Request for reprints: Dr. Rahul Sahai, C/o Ramanath Sahai, 69-Gandhi Nagar, Agra-282 003.