Inflammation and infection

Unmeshed split-thickness SKIN grafts for penile plastic in patients with paraffinoma

Dunev Vladislav a, * , Genov Pencho b , Stoykov Boyan c , Kolev Nikolay a

a Medical University Pleven, “Georgi Kochev” 8A str, 5800, Bulgaria
b UMHAT “Kanev”, “Nesavesmastr” 2 str, 7000, Bulgaria
c Medical University Pleven, “Bulgarian Aviation” str, 5800, Bulgaria

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ABSTRACT

Paraffinoma of male genitalia (PMG) is a chronic granulomatous reaction to a “foreign body” developed after injection of exogenous substances (ES). There are many plastic surgical techniques for aesthetic and functional recovery of affected tissues. We report here use of unmeshed split-thickness skin grafts (unmSTSG) in patients with genital paraffinoma.

Introduction

Injection of ES in order to enlarge the penis is still common practice in Bulgaria. We use for skin recovery: Meshed split-thickness skin grafts (mSTSG), Modified Cecil’s, Bilateral scrotal flaps and Simple excision. We also use since 2017-year unmSTSG.

Case presentation

A 28-year-old man was admitted to the Clinic of Urology at Medical University Pleven in 2017. Five year ago, he was injected 40 ml liquid paraffin in his penis. The symptoms were pain and swelling. One year later, periodic inflammation began with redness and swelling of the genital area. These complications have been treated with antibiotics and anti-inflammatory drugs. Detailed physical examination showed tender, irregular, granulomatous formations engaging whole genital and pubic area. The penile skin was with discoloration and necrotic area [Fig. 1]. The patient had not sexual intercourse for over of year, because of penis deformity and pain. There was one palpable right inguinal lymph node about 2 cm.

We removed completely the skin and subcutaneous tissue infiltrated by the foreign material until Buck’s fascia. An 0.015 inches unmSTSG graft was used taken from the right thigh anterior surface with length – penile circumference and width – 10 cm. [Fig. 2]. The penis was immobilized with 100 ml split syringe on anti-septic, paraffin impregnated, chlorhexidine acetate gauze dressing. A urethral catheter was inserted for five days [Fig. 3]. Scrotal and pubic granulomatous tissue are also removed with excision and primary closure. The patients were followed-up for three months for post-operative complications and assessment of the cosmetic and functional outcome.

Results

The cosmetic outcome was good as judged by the patient and the surgeon. The patients had normal spontaneous erections and normal voiding. The IIEF-5: was 23. There was no contraction of the flap and deformation of the penis. There was some shrinkage (plication) of the new skin on the midline of the dorsal penis about 1 cm. The patient developed in the distal, ventral part of the penis necrosis about 0.4 cm., probably due to the incomplete removal of the granulomatous tissue or/ and incomplete autograft adhesion in this area.

Discussion

It is difficult to understand the reasons that compel normal anatomically and functionally men to use exogenous substances to change their appearance. Since ancient times, the size of the penis has been important for men. To impress their partners and increase their self-esteem, some of them are looking for a way to enlarge their genitals. The Sadhus holy men of

* Corresponding author. Medical University Pleven, “Georgi Kochev” 8A str, 5800, Bulgaria.
E-mail addresses: v_dunev@abv.bg (D. Vladislav), genov_p@abv.bg (G. Pencho), atanassovmd@yahoo.com (Stoykov Boyan), kolevmd@yahoo.com (Kolev Nikolay).
† Present/permanent address. “Hristo Botev” 59 str. Pleven Bulgaria 5800.
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India and males of the Cholomec tribe in Peru used weights to lengthen their penises. Males of the Dayak tribe in Borneo mutilated their penises by forming holes and then sticking decorative items through them for their partners pleasure. In the 16th century, men of the Topinama tribe allowed poisonous snake to bite their penises in order to enlarge them.

In 1899, Robert Gersuny injected mineral oil to substitute the absence of testicles in a patient who had undergone bilateral orchiectomy for tuberculosis epididymitis. The immediate success of the operation encouraged him to use Vaseline as filling material for soft tissue defects.

In 1936 Vinogradov, published a paper describing some late results in the injection of mineral oil and this paper is the only one in the literature which gives a complete natural history of oleogranuloma from the early stages to the development of late sequelae. In advanced cases, the nodular tumours caused lymphatic obstruction and elephantiasis; multiple ulcers developed following trivial injuries and healed slowly with abundant scar tissue, and the final stages showed chronic deep ulceration occasionally with malignant change. A proximal spread of the tumour masses, sometimes with lymphnode enlargement, was also noted, and was correctly attributed to spread of the foreign oil particles along lymph channels. More than 130 patients with PMG have been operated in Department of Urology, University Hospital “Dr. G. Stran- ski”, Pleven, Bulgaria in the last 13 years. The main surgical techniques used for the plastic reconstruction of the penis are: Simple excision, Bilateral scrotal flaps, Modified Cecil’s and mSTSG. Split-thickness skin graft phalloplasty with or without mesh has resulted in a cosmetically acceptable and sexually functional repair. STSG in conjunction with an artificial dermal regeneration plate has also resulted in a robust reconstruction with good aesthetic results.
Conclusions

Our experience using unmeshed split-thickness skin graft for paraffinoma of male genitalia showed good aesthetic and functional results. We believe this procedure should be offered to patients as a first line treatment.

Declaration of competing interest

The authors declare that they have no competing interests.

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