PENILE PARAFFINOMA AFTER SUBCUTANEOUS INJECTION OF PARAFFIN. TREATMENT WITH A TWO STEP CUTANEOUS PLASTY OF THE PENILE SHAFT WITH SCROTAL SKIN

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Summary.- OBJECTIVE: To report a rare case of penile paraffinoma caused by the subcutaneous or intra-urethral injection of foreign substances containing long-chain saturated hydrocarbons. These were injected in order to increase the penis size which generated a chronic granulomatous inflammatory reaction. This is a rare practice in the western world.

RESULTS: The operative procedure was successful and the patient had good aesthetic and functional results. Paraffin and other materials injected into the penis can produce many complications. Foreign body granuloma, skin necrosis, penile deformity, chronic and unhealed ulcer, painful erection, and the inability to achieve a satisfactory sexual relationship are some of the resulting complications. Intralesional or systemic steroids have been used in primary sclerosing lipogranuloma resulting in the disappearance of the granuloma, but in our opinion the treatment of choice should be radical excision, and, if necessary, secondary reconstruction of the penis.

CONCLUSION: The injection of foreign substances to enhance penis size is currently an unjustifiable practice. However, it is still carried out, especially in Eastern Europe and Asia. In most cases surgical treatment is needed to treat the complications and the best modality seems to be radical excision together with follow-up.

Keywords: Penile Paraffinoma. Sclerosing lipogranuloma. Paraffin reaction.
INTRODUCTION

Penile paraffinoma is the result of the subcutaneous injection of substances containing straight chain saturated hydrocarbons, such as paraffin, petroleum jelly, or mineral oils. These substances cannot be metabolized and a granulomatous inflammatory reaction occurs. Such a practice has fallen into disuse, although in some countries in Eastern Europe and Asia it remains in force, performed primarily by untrained, non-healthcare personnel or by the patient himself (1). Immigration has led to the appearance of some cases in our centres.

We report a rare case of sclerosing lipogranuloma of the penis after the subcutaneous injection of paraffin.

CASE REPORT

A 32-year-old Bulgarian male presented with a two-year history of elastic and slightly painful penis swelling. The patient reluctantly admitted that 2 years previously he had received multiple subcutaneous injections of paraffin, administered by a friend, for penile enlargement purposes. In the six months prior to the consultation he reported experiencing various skin lesions and painful erection.

Physical examination revealed painless elastic penile swelling with multiple areas of necrosis and skin ulceration (Figure 1). A mass was also palpated at the dorsal penile root. The penile gland was not explored due to the inability to retract the foreskin. There were no palpable local lymph nodes. The routine laboratory tests were unremarkable as well as the specimen urine culture.

Magnetic resonance imaging was carried out revealing 10 mm maximum concentric hypodermic cell tissue thickening of the penis that stretched from the medium and distal penis to the suprapubic region (Figure 2).

The proposed treatment, excision of paraffinoma and reconstruction using scrotal skin in a two-stage procedure, was explained to the patient. In the first stage of the surgical intervention the diseased tissues that affected all of the penis and the suprapubic region were removed. Then a sagittal incision of the scrotum was performed together with burial of the penis using

FIGURE 1. Macroscopic aspect of the paraffinoma at the time of diagnosis.

FIGURE 2. Traverse and sagittal section of the magnetic resonance imaging in T2 sequence where there was thickening of the hypodermic cell tissue of the penis.
dorsal and coronal suture (Figure 3). A penrose drain was placed and later removed after 48 hours.

The patient was examined one month later, showing good adhesion of the graft. The histological findings were consistent with chronic xantogranulomatous inflammation and necrotizing skin due to a reaction to a foreign body (Figure 4).

After three months the patient underwent the second surgical stage. Plastic reconstruction was performed by means of a double lateral and ventral scrotal incision of the penis with subsequent scrotal closure and longitudinal suture of the ventral penis face. Excellent aesthetic and functional results were reported at 14-months follow-up.

DISCUSSION

Gersuny began the practice of injecting paraffin into the scrotum in 1899 (2) in order to replace testicles removed because of tuberculosis. Successful results were reported. Afterwards this technique was used in the treatment of urinary incontinence and premature ejaculation while at present it is not indicated at all (3). The clinical manifestations after injection may take months or years to appear in the form of painless indurated firm plaques or nodules, which can be attached to the skin and to deep fascia. Sometimes, as is the case at hand, it can produce penile disfigurement, chronic and unhealed ulceration and painful erection. There are also cases of distant migration of the injected substances (4). Recently, some authors have described cases of penile silicone granuloma (siliconoma) (4) and sclerosing lipogranulomas in the genitalia of men who had been administered topical vitamin E. These granulomas, due to their similar clinical, histological and chemical appearance, seem to have the same pathogenic mechanism (5).

The paraffinoma (also known as oleoma or sclerosing lipogranuloma) expresses microscopically as a distortion of hypodermic cell tissue. The stromal septa undergoes hyaline necrosis that allows the fat vacuoles to coalesce into different sized globular structures separated by fibrous connective tissue. These structures, similar to cysts, can be surrounded by syncytial giant cells, endothelial cells or fibrous eosinophilic tissue. Numerous macrophages containing phagocytosed fat and moderately heavy round cell infiltration can be seen round the blood vessels (6). Macroscopically, paraffinoma is characterized by inflammation, swelling, scars, necrosis, deformity, sores and sterile abscesses. Sclerosing lipogranuloma can produce painful erections and even the inability to achieve satisfactory sexual relationships (7).

Sometimes the injection of foreign substances in male genitalia requires urgent surgical treatment (7). The patient does not consult immediately but when the deformity is evident or the ability to have sexual intercourse is affected. The treatment of choice is surgery and, if necessary, secondary reconstruction of the penis with various techniques such as free or pedunculated skin grafts or scrotal flaps. A one-stage procedure involving the excision of granulomatous tissue and plastic reconstruction has also been reported in the literature (8). Intrallesional or systemic steroids have been used in primary sclerosing lipogranuloma resulting in the disappearance of the granuloma (7,9).
In our opinion the only definitive treatment is the excision of the affected tissue, otherwise recurrence of the symptoms can occur. In fact, when the injection of foreign substances is the cause of the lesion, conservative treatment only provides symptomatic relief and, in our view surgery is the only definitive treatment option. However, some patients reject surgery due to the fear that the appearance of their penis will become even more distorted.

CONCLUSION

The injection of foreign substances to enhance penis size is currently an uncommon practice but cases are still being reported, especially in Eastern Europe and Asia. The treatment of choice is surgery, although in certain cases or when faced with patient refusal, conservative treatment may be an option.

REFERENCES AND RECOMMENDED READINGS

(*of special interest, **of outstanding interest)


HISTOLOGICAL CHANGES DUE TO INTRAVESICAL INSTILLATION OF MITOMYCIN C

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Summary.- OBJECTIVE: Transurethral resection (TUR) is highly effective in the local control of superficial bladder cancer. However, the recurrence rate can reach 80% of the cases. Adjuvant intravesical chemotherapy may decrease significantly tumor recurrence. We describe a bladder adverse reaction to mitomycin C as adjuvant therapy for non-invasive bladder cancer.

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