A Young Man with Multiple Scrotal Growths

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A 30 year-old Bangladeshi migrant worker with no underlying medical history complained of multiple growths over bilateral scrotum for the past 3 years (refer to Figure 1). It started with a single "pea-like" swelling over the right scrotum which later grew in size and increased in numbers until both scrotums became affected. Aside from occasional itchiness, the growths were not associated with any ulceration, pain or abnormal discharge. There was no history of preceding trauma, urogenital or constitutional symptoms. Physical examination revealed multiple firm and nontender skin-coloured nodules over both scrotums with the largest measuring 2 cm in diameter. There were no lymphadenopathy and no similar lesion was found elsewhere on the body. Laboratory investigations reported normal levels of serum calcium, phosphorus and parathormone. Excisional biopsy of the nodule showed multiple amorphous calcium deposits within the dermis that are free of any epithelial lining or surrounding granulomatous reaction.

Figure 1: Multiple nodules over bilateral scrotums.

Question

1. What is the diagnosis?

a. scrotal calcinosis

b. nodular scabies

c. epidermal cyst

d. steatocystoma

Answer: a. scrotal calcinosis

Discussion

Scrotal calcinosis (SC) is a rare condition marked by the presence of intradermal calcium deposits resulting in progressive appearance of skin nodules which increases in number and size with age.[1,2] Although benign, in extreme cases the disfigurement may be alarming. SC typically

appears in early adulthood but patients tend to present late due to the indolent course of the disease.[1,2] The disorder is mostly asymptomatic with aesthetic concern being the foremost reason for consultation.[1] Occasionally, the lesions may be associated with itchiness, sense of pressure, chalky discharge or ulceration.[2,3]

Current knowledge of this rare entity is limited to case report and case series in the literature. As a result, the pathogenesis of the disease is uncertain. It was initially believed to be idiopathic, but emerging hypotheses suggest that the cause may be due to dystrophic calcification of pre-existent epidermal cyst, eccrine cyst or degenerated dartos muscle.[4,5] Foreign body infiltration and local trauma have been proposed as potential triggers for the calcification.[2] None of the theories however, have been conclusively proven.

The differential diagnosis for nodular scrotal growth include epidermal cyst, lymphangioma circumscriptum, steatocystoma, angiokeratoma, genital leiomyoma, epidermoid carcinoma and nodular scabies among others.[1,2,6] Nevertheless, SC is easily recognised clinically.[2] Confirmation of diagnosis however, is obtained through histopathology.[4] Biopsy specimen stained with haematoxylin and eosin usually reveals the presence of calcium deposits within the dermis which can further be confirmed by applying the von Kossa stain. Epithelial lining is mostly absent with variable degree of surrounding granulomatous reaction.[7]

The mainstay of treatment is surgery which is indicated for intolerable local symptoms or aesthetic improvement.[2] Both single and multi-stage excision can be performed with good outcome although lesions may recur.[4] Excision is limited to the dermis leaving the dartos layer intact. Extensive disease may require partial scrotectomy with reconstruction.[5] More recently, superior result was reported with the use of erbium:YAG laser as treatment modality.[2]

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