



A Case of Surgically Treated Epidermal Cyst En Plaque of Scrotum

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Dear Editor:

A 54-year-old male presented with multiple nodules on the scrotum which lasted for 2 years. The lesions were distributed together on the right side of the scrotum (Fig. 1A). A punch biopsy was conducted on the scrotal nodule. Histological findings showed only keratin materials. After a month, the surgery was performed under local anesthesia. Multiple scrotal nodules, including part of the dartos muscles, were removed at once (Fig. 1B). Then, the defect site was repaired using an advancement flap with dartos muscle. Histological findings of the removed lesions showed several epidermal cysts.

Epidermal cysts are well encapsulated, and histologically characterized by a lining of stratified squamous cells. Cysts that occur in the scrotum could often be left unnoticed, because they have no symptoms. However, if an infection occurs especially in multiple cysts, the infection could spread to the surrounding cysts and rarely, the whole scrotal wall. This can lead to serious complications, including Fournier's gangrene and septicemia¹. This is why it is important to treat multiple cysts of the scrotum through complete excision.

Multiple nodules on the scrotum could have several different diagnoses, including idiopathic scrotal calcinosis (ISC), steatocystoma multiplex, or milia en plaque (MEP). However, the most common misdiagnosis of scrotal cysts is ISC. It is

a rare benign condition, which is termed as such due to the abnormal deposition of calcium in the scrotal skin or subcutaneous tissue. In the case of ISC, histological findings are characterized by the deposition of calcium in the dermis without an epithelial lining. Some authors suggest that ISC is actually

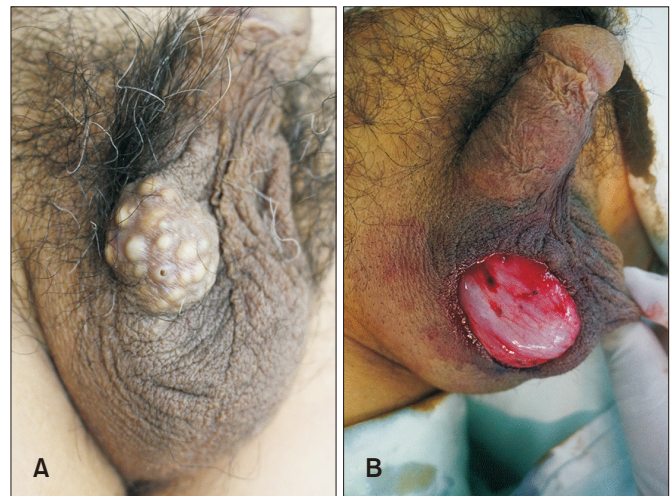


Fig. 1. Clinical photographs of clinical features. (A) Multiple nodules were placed on the right side of the scrotum. (B) Scrotum with multiple scrotal nodules, including the dartos muscle resected in a single resection. We received the patient's consent form about publishing all photographic materials.

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Table 1. Differential diagnoses of epidermal cyst en plaque

Contents	Epidermal cyst	MEP ³	Idiopathic calcinosis cutis ²	Steatocystoma multiplex ⁴
Peak age	Third and fourth decades	Fourth to seventh decades	Third and fourth decades	Second and third decades
Clinical features	Flesh colored nodule	Firm, white papules (several millimeters) on an erythematous base	Slow-growing yellowish nodules	Firm, yellowish colored papules and nodules
Histology	Lined by stratified squamous cells with keratinous and other materials	Lined by stratified squamous cells with keratinous materials	Deposition of calcium in the dermis without lining	Lined by stratified squamous epithelium containing sebaceous gland
Predilection site	Scalp, Trunk, Face	Retroauricular area	Scrotum	Chest
Lesion numbers	Single to multiple	Multiple	Single to multiple	Multiple
Treatment options	Excision	Excision Topical retinoids	Excision	Excision Laser treatment

MEP: milia en plaque.

a misnomer and its underlying cause is the calcification of the epidermal cyst of the scrotum². The characteristics of the differential diagnosis of epidermal cyst en plaque are summarized in a Table 1²⁻⁴.

In this case, the patient was treated with a single-stage excision and reconstruction and he was satisfied cosmetically and functionally. There are several reasons why this treatment was possible. First, the lax nature of the scrotum and abundant tissue of scrotal skin ensured that only minimal defects were left after reconstruction. And because the scrotum receives blood supply by multiple vascular systems which run through the fascia of dartos muscle, the risk of ischemia, which is important for flap design, is low⁵. In addition, the patient had multiple nodules in one plaque. Considering that the distribution of these lesions is similar to that seen in MEP³, it was named epidermal cyst en plaque. It is believed that this rare en plaque distribution of lesions helped to perform a complete excision. In literature, a form of concentrated distribution of epidermal cysts in a limited part of the scrotum, as in this case, has not yet been reported.

In conclusion, we report a rare case of epidermal cyst en plaque of scrotum. The fact that it occurred in the elastic scrotal skin and the characteristic distribution of the lesion facilitated a complete excision and reconstruction of the lesion with minimal defects.

CONFLICTS OF INTEREST

The authors have nothing to disclose.

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