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ECCRINE POROCARCINOMA OF THE THIGH: A CASE REPORT

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SUMMARY

Eccrine Porocarcinoma (EPC) is a rare malignant tumour of the eccrine gland that occurs predominantly in the elderly. We report a 23-year-old female who had a slowly growing lump in the left thigh for 8 months. It spontaneously ruptured and had serosanguinous discharge. The mass was warm, tender and measured 10x6x4cm. A missed diagnosis of subcutaneous abscess was made for which she had incision and drainage. This resulted in a non-healing ulcer. The excision biopsy of the ulcer came out to be EPC. This case highlights the need to maintaining a high index of suspicion for rare tumors like EPC.

INTRODUCTION

Eccrine Porocarcinoma (EPC), a malignant tumour of the eccrine sweat gland, is a rare slow growing skin cancer with a high rate of recurrence and distant metastasis. Its etiology is not fully understood though it is known to arise mostly from a pre-existing eccrine poroma[1]. It has also been known to arise de-novo or secondarily from pre-existing lesions like nevus sebaceous, chronic lymphocytic leukaemia, and actinic keratosis[1,2]. Predisposing factors like immunosuppression, exposure to chronic light and chemicals are said to play a role[2, 3]. EPC accounts for about 0.01% of all cutaneous malignancies[2, 3]. EPC occurs in all races and both sexes in the age range of 21-90years and predominantly in the elderly [2, 3]. It has predilection for the extremities, particularly the lower limbs [2, 3].

The clinical history is often a long duration of a firm asymptomatic nodular lesion < 2cm in diameter with a sudden rapid increase in

size and dull pain. EPC can also appear as infiltrative, ulcerative or polypoid lesion [1-3]. Recurrence and spontaneous bleeding are also typical features [3]. The presentation of EPC can be confused with other benign and malignant skin lesions.

Histological diagnosis is established based on the presence of polygonal cell clusters with invasive architectural pattern, ductal and eccrine differentiation and cytological pleomorphism[4]. Immunohistochemical techniques are not strictly necessary; however, it elucidates the subtypes. It is also established that the cells that line the ducts and clefts are positive for carcinoembryonic antigen and negative for S100 protein[4,5]. EPC is a very rare skin tumour and the diagnostic dilemma associated with its diagnosis forms the basis for this case report.

CASE PRESENTATION

A 23-year-old female student presented to our Family Medicine Department with a swelling in the left thigh of 8 months duration. The lump was insidious in onset, initially painless but later was associated with tolerable dull ache. The swelling increased slowly in size and ruptured spontaneously at 7 months of onset with sero-sanguineous discharge. She was referred to the plastic surgery unit based on a clinical diagnosis of discharging ruptured cyst.

Patient was clinically stable with normal vital signs. The medial aspect of proximal left thigh showed a 10x6x4cm differentially warm, tender mass with mixed consistency. There was a solitary palpable rubbery ipsilateral node in the groin. The neurovascular status of the ipsilateral lower extremity was intact. A clinical impression of subcutaneous abscess was made. She had incision and drainage where about 10mls of pus mixed with blood was drained, wound was irrigated with normal saline, and packed with povidone iodine.

Two weeks post incision and drainage; there was slow improvement with reduction in the size of the mass to 3cm x3cm x4cm. Patient was however not compliant with follow-up appointments. She presented 5 months later with non–healing 3cmx3cm ulcer. Her haematocrit was 26% for which she received two pints of Packed Red Cells. The erythrocyte sedimentation rate was 123mm/1st hour Westergren. Her white cell count was within normal limit and her HIV screening test was negative. The X-ray of the left femur showed no bone involvement. She had wound excision biopsy with primary closure. Her recovery was uneventful and wound healed within 2 weeks, before she was lost to follow up.

Histopathological report Sections show skin and its adnexal structures. The underlying dermis shows proliferation of nest and sheets of round-polygonal cells extending from the epidermis into the dermis. The individual cells show hyperchromatic -vesicular nuclei, nuclear pleomorphism and prominent nucleoli. These histopathological features are consistent with malignant adnexal skin tumour: Eccrine Porocarcinoma (Figures 1 and 2)

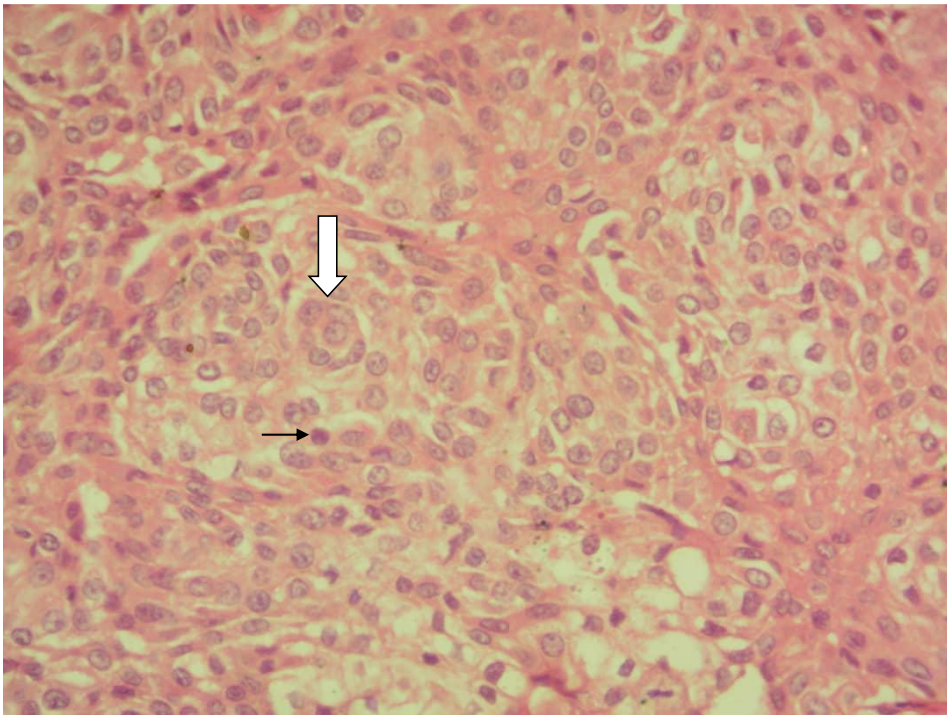

Figure. 1 Photomicrograph showing malignant epithelial cells (round to oval cells) disposed in nests with pleomorphic vesicular nuclei, abnormal mitosis and attempt at duct formation.
Dark arrow – abnormal mitosis
White block arrow – duct formation

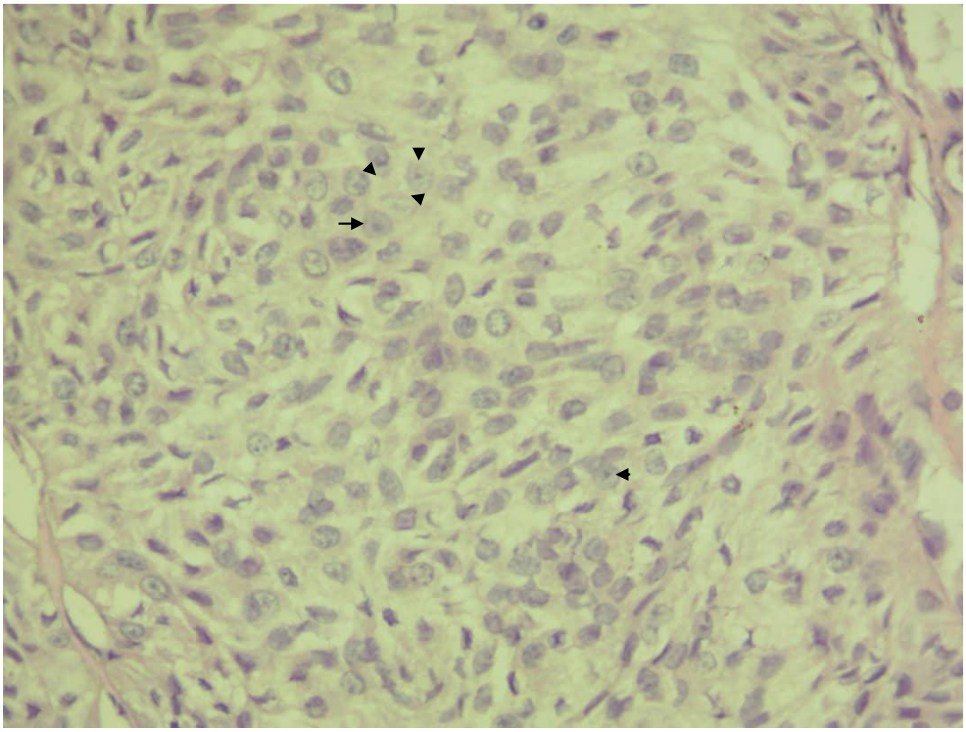

Figure 2. Photomicrograph showing malignant epithelial cells (oval to polygonal cells) disposed in incomplete nests with pleomorphic vesicular to hyperchromatic nuclei and prominent nucleoli.
Arrow heads: prominent nucleoli.

DISCUSSION

Eccrine Porocarcinoma is a rare cutaneous malignancy, especially in the young. It is mainly a disease of the older persons, occurring in the sixth and seventh decades.[2, 3, 7.] Samaila et al in their sixteen year review of cutaneous malignancies in Zaria Nigeria reported 52 cases with no EPC[7]. Men and women are affected, and prevalence varies in both sexes in diverse studies.[2, 8] Though EPC can affect any part of the body, Robson et al and others reported that the most common site is the lower limbs just like in our patient[8, 9].

As in most studies this case did not have any obvious predisposing factor. This therefore arose de-novo. From a hindsight, the history of spontaneous sero-sanguineous discharge reported by the patient is consistent with one of the typical features of spontaneous bleeding in ECP[3]. However, the tenderness, differential warmth and mixed consistency of the mass as well as 10mls of pus drained from it obscured the presence of EPC, hence, the missed clinical diagnosis. EPC unlike Squamous cell carcinoma has not been reported to present as chronic subcutaneous abscess[10]. An abscess in the immediate vicinity or adjacent to the lesion is a plausible explanation for the pus drained in index case.

Eccrine Porocarcinoma is rarely diagnosed preoperatively, and the tissue subjected to histology. However surgical management is usually not initially planned. The management consist of surgical resection in all cases with clear margins and regional lymph node dissection if involved, followed by adjuvant therapy in form of local irradiation or chemotherapy.[8] Our patient had tumour excision for assumed inflammatory lesion. There was no lymph node dissection because as EPC was not thought of but rather a chronic non healing ulcer. In addition, the enlarged lymph node did not clinically suggest malignancy. The histopathological findings of the biopsy specimen from the lesion of the patient as shown in Figures 1 and 2 is consistent with EPC as in other studies[4].

CONCLUSION

Eccrine Porocarcinoma should be considered a differential diagnoses in patients with longstanding skin lesions especially in the extremities. A high index of suspicion of EPC is requisite for the reduction the associated diagnostic dilemmas.

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