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Porocarcinoma: A systematic review of literature with a single case report

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ABSTRACT

INTRODUCTION: Eccrine porocarcinoma is a very rare type of skin cancer. It is an aggressive dermatological malignancy. We presented a 62-year-old male with long history of a mass in left forearm complicated by distant metastasis and death. A rapid review of literature has been presented.
CONCLUSION: Eccrine porocarcinoma is a rare but aggressive type of skin disease. It may arise de novo or complicate a benign skin lesion. Wide local resection is recommended.

1. Introduction

Eccrine porocarcinoma (EP) is a very rare type of skin cancer that is sometime confused with other forms of dermatological malignancies. [1] Pinkus and Mehregan were the first to describe EP in 1963. [2] Although the exact prevalence is not known, according to some authors, it accounts for 0.005% to 0.01% of all cutaneous tumors. [3,4] Patient age varies according to different studies, ranging from 21 to 90. [5,6] It predominantly occurs in elderly people who are more than 60 years old and has a female predominance. [4]

The tumor favors extremities, particularly the feet and legs. [7] The propensity to form multiple cutaneous metastases is an unusual characteristics of EP. [7] It may also associate with visceral metastasis with a fatal outcome. [7] Surgical resection is the mainstay of treatment modality. [8] In line with SCARE criteria, we reported a single case of EP with systematic review of reported cases in literatures. [9]

2. Patient information

A 62-year-old Kurdish male, Presented with a swelling on his left forearm for 10 years, increasing in size in last two months, he was known case of hypertension and underwent inguinal hernia repair 10 years ago.

2.1. Clinical findings

A hard mass on his posteromedial aspect of left mid-forearm, measuring about 3 × 2 centimeters, non-tender and fixed to the skin (Fig. 1).

2.2. Diagnostic assessment

Hematological tests were normal including erythrocyte sedimentation rate (ESR). Doppler ultrasound of the left elbow showed ill defined intramuscular hypoechoic lesion, measuring about 32 × 21 millimeters. Magnetic resonant image showed well defined oval mass within subcutaneous mass fat tissue with mild post-contrast enhancement without evidence of surrounding invasion (Fig. 2). The professional diagnosis of benign cystic lesion was made especially dermoid cyst and lipoma.

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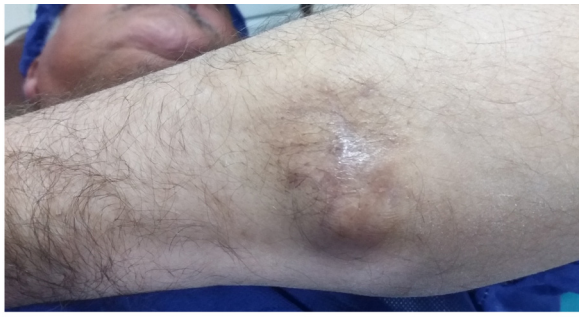
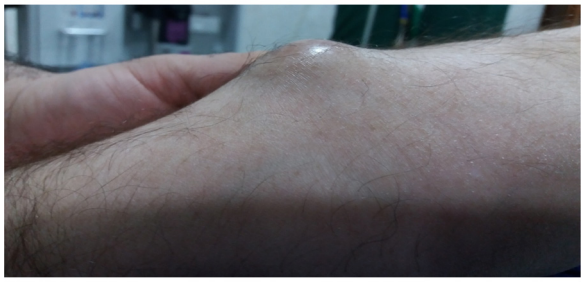


(A)



(B)

Fig. 1. clinical appearance of the swelling. (A) Posterior view. (B) Lateral view.

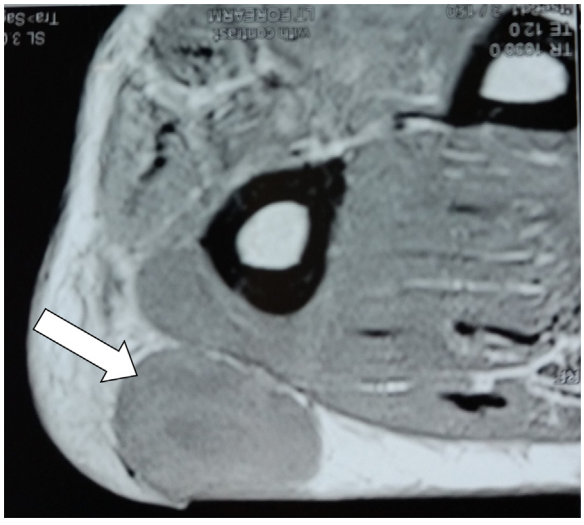


Fig. 2. Cross sectional magnetic resonant image of the lesion showing well defined homogenous mass (white arrow) without invading surrounding tissues.

2.3. Therapeutic intervention

Under local anesthesia, by transverse elliptical incision. Excision of the mass was performed with its cystic wall. Histopathological result showed lobules of tumor cells, composing of 2 patterns. Eosinophilic and clear cells arranging in nodular, nest and solid sheets. The eosinophil cells are polyhedral to fusiform with variable cytoplasm and indistinct cell borders. The nuclei are hyperchromatic, round to oval with indistinct nucleoli. The clear cells are large polyhedral with abundant clear cytoplasm and distinct cell borders. Mitosis was abundant. Extensive central necrosis was found, (Figs. 3 and 4). Immunohistochemistry confirmed EP.

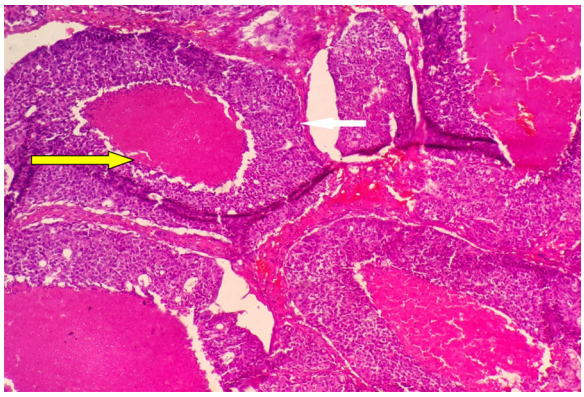


Fig. 3. Large islands of tumor cells (white arrow) with central necrosis (yellow arrow).

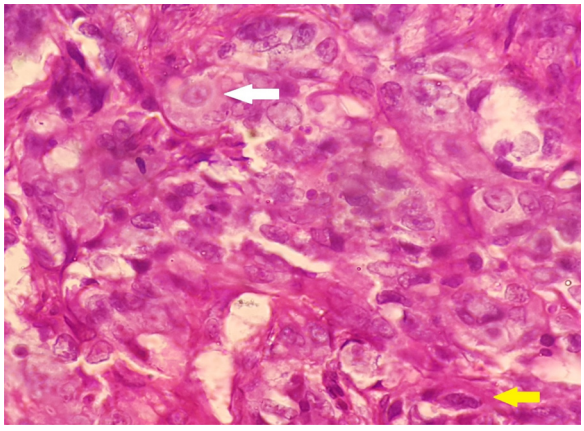


Fig. 4. Tumor cells demonstrating marked nuclear pleomorphism and prominent nucleoli (white arrow). There are large polyhedral cells with abundant clear cytoplasm (yellow arrow).

Table 1
Distribution of reported cases according to their age groups.

Age group (year)	Number of reported cases/%	References
0–20	0/0	
21–30	3/5	[5,12,13]
31–40	0/0	
41–50	6/11	[6,14–16]
51–60	9/16	[2,6,7,13,17–19]
61–70	12/21	[4,6,21–24]
71–80	18/32	[1,3,6,11,25–30]
81–90	8/14	[6,10,30–34]

2.4. Follow-up and outcome

The patient was referred to oncologist for re-assessment. All body positron emission tomography (PET) scan showed distant metastasis to the chest, cervical lymph nodes and brain. The patient started receiving chemotherapy and radiation therapy to the brain. Two months later, his condition deteriorated and the patient died from respiratory failure.

3. Discussion

EP is a very rare dermatological problem. Since its first description by Pinkus and Mehregan in 1963, about 250 cases have been reported in different language literatures. [10] Among reported cases, 8th decade of life is the ideal age of affection followed by 7th decade (Table 1).[1,3,6,10,11,25–34] EP does not have predilection for specific part of the body. [24] Arslan et al. stated