Recurrent Eccrine Porocarcinoma: A Case Report

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Authors’ contributions

This work was carried out in collaboration between all authors. Author OK designed the study, wrote the protocol and wrote the first draft of the manuscript. Author HE managed the literature searches, analyses of the study and performed the spectroscopy analysis. All authors read and approved the final manuscript.

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ABSTRACT

Eccrine porocarcinoma is a very rarely seen malignant skin tumour which originates from the intra-epithelial section of the eccrine sweat glands. They are generally seen in the elderly and are most often located in the lower extremities. This tumour which has a poor prognosis and displays different biological behaviour, often has a tendency to recurrence and metastasis is seen in the skin and lymph nodes. The basis of treatment is surgical excision and if there is lymph node involvement, regional lymph node dissection must be applied. The case is here presented of a 67-year old patient with eccrine porocarcinoma which developed in the inguinal region and showed recurrence.

Keywords: Eccrine; porocarcinoma.

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1. INTRODUCTION

Eccrine porocarcinoma is a very rarely seen skin tumour which originates from the intra-epithelial section of the eccrine sweat glands [1]. The majority are seen located in the lower extremities [2]. They are mostly seen between the ages of 50-80 years with no differentiation between the genders [3]. Although they generally develop as a result of malignant transformation of previous eccrine poroma, occasionally they may develop novo [4]. Primary treatment is wide local excision and if clinically necessary, regional lymphadenectomy [3]. This tumour which has a poor prognosis and displays different biological behaviour, often has a tendency to recurrence (17%) and metastasis is seen in the skin and lymph nodes. The frequency of distant organ metasasis (11%) is very low [5]. The aim of this paper was to present a rare case of eccrine carcinoma which was seen with local recurrence and lymph node metastasis, together with a review of literature.

2. CASE

A 67-year old male presented with the complaint of a painful, hard swelling which had emerged in the left inguinal region and had been growing in size over the last year. Physical examination determined a mass in the left inguinal region, 3 x 3 x 2.5 cm in size, with irregular borders with a hard texture over an ulcer. On ultrasonography (US) and computed tomography (CT), a solid mass (soft tissue mass) was observed in the left inguinal region 3 x 3 x 2.5 cm in size, with extremely irregular borders, containing millimetric calcifications causing heterogenity in the surrounding fatty tissue. Enlarged lymph nodes were determined 27 x 9 mm in diameter in the left inguinal region. No distant metastasis was determined from the scans. Wide resection with good surgical borders was applied to the mass lesion in the patient. Left inguinal lymph node dissection was applied. In pathology, 2 metastatic lymph nodes were determined (Fig. 1). In the immunohistochemical examination, neoplastic cells were stained nuclear positive with p63, positive cytoplasmic with cytokeratin (CK)7 and CK19 and positive with carcinoembryonic antigen (CEA) (Figs. 2a-c). From the histopathological and immunohistochemical findings, the diagnosis was made of primary eccrine porocarcinoma (malignant eccrine poroma) (Figs. 3a-b).
On the CT angiography applied to the lower extremity 3 months later, a mass lesion was observed, 29 x 17 mm in size in a hypodense area observed to have surrounding contrast involvement approximately 1.5 cm in diameter, located close to the inguinal region adjacent to the left external iliac artery and vein. In the posterior of the left iliac vein, a 14 x 12 mm mass lesion was observed with more intense contrast than the surrounding soft tissue. Left iliac lymph node dissection was applied. In pathology, 3 metastatic lymph nodes were determined. As the tumour was close to the surgical border, radiotherapy (RT) was applied to the left thigh and hemipelvis area. After 1 year, a recurrent mass of 2.5 x 2 cm with irregular borders was determined on MR in the left inguinal area (Fig. 4) so re-excision was applied. In the last 3 years of follow-up, no recurrence or distant metastasis was determined.

3. DISCUSSION

Sweat gland tumours are rarely seen and comprise approximately 0.005% - 0.01% of all cutaneous epithelial tumours [6]. Sweat gland tumours are known as eccrine poroma if benign, and eccrine porocarcinoma if malignant [4]. There is generally ulceration on the surfaces of porocarcinoma which reach a wide diameter in a verrucous plaque or polypoid structure. They are most often seen at the ages of 50-80 years and at equal rates in males and females [3]. Location is most often in the lower extremities [2]. Lesion diameter may vary between 1-10 cm. Just as the growth rate may be slow, it may also be rapid [7]. The case presented here was 67 years old, male with an ulcerative type lesion of 3cm diameter, located in the inguinal region.

Eccrine porocarcinoma generally emerge with the malignant transformation of previously present eccrine poroma, sebaceous nevus, chronic lymphocytic leukaemia or actinic lesions or they develop in patients with AIDS, diabetes mellitus or organ transplantation who have immune system suppression (secondary porocarcinoma) and occasionally they emerge as novo (primary porcarcinoma) [4]. The p53 tumour suppressor gene plays a role in the carcinogenesis of eccrine porocarcinoma [1]. In the current case, as there was no previous skin lesion or concommitant disease, it was evaluated as primary porocarcinoma. In the immunohistochemical examination, nuclear positivity was determined with p63 in neoplastic cells.

The most useful diagnostic feature of eccrine porocarcinoma, as in the current case, is the positive staining showing CEA in addition to the loss of polarity and tumour islets formed from atypical poroid cells characterised by pleomorphism and ductus formations [7].

The basic treatment form is total excision of the lesion with adequate surgical borders and with this treatment, a cure can be obtained in 70-80% of cases [3]. In cases with regional lymph node involvement, lymph node dissection must be applied. Mortality in these types of cases is reported as 67% [8]. However much the efficacy of chemotherapy and RT is reported to be limited, in cases with residual tumour tissue close to risky areas such as neurovascular structures, local RT is applied and in cases with metastasis determined in distant organs such as the lungs and bones, chemotherapy is applied [2,8]. In the current case, as the tumour was close to surgical
borders, local RT was applied. In respect of high rates of postoperative local recurrence, and the risks of lymph nodes and distant metastasis, patients should be followed up at regular, close intervals clinically and with radiological and scintigraphic methods.

Poor prognostic factors are that in every growth area of the tumour, a maximum of 14 mitosis, lymphovascular invasion, tumour depth of >7mm, an infiltrative growth pattern in the tumour borders, multinodularity, ulceration and rapid growth [2]. In addition, a significant correlation has been determined between tumour size and prognosis [9]. In the current case, the tumour was of a depth to infiltrate some areas of muscle tissue. There was lymphovascular invasion. In respect of internal organ involvement, no metastasis focus was determined.

This tumour which has a poor prognosis and displays different biological behaviour, often has a tendency to recurrence and metastasis is seen in the skin and lymph nodes. In a study by Robson et al, 69 patients were followed up and local recurrence was determined in 17%, lymph node metastasis in 19% and distant metastasis in 11% [2]. In the current case, local recurrence was determined once and regional lymph node metastasis twice. The biological behaviour of the tumour in the current case with both local recurrence and lymph node metastasis showed a parallel with data in literature.

4. CONCLUSION

In conclusion, eccrine porocarcinoma is a rarely seen skin supplementary tumour. The results of the small numbers of series which have been reported of cases diagnosed with eccrine porocarcinoma have highlighted the risk of local and regional recurrence. As the basis of treatment is wide excision, patients must be closely monitored in respect of local recurrence and regional lymph node metastasis, similar to many benign- malign diseases [10-13].

CONSENT

All authors declare that 'written informed consent was obtained from the patient (or other approved parties) for publication of this case report and accompanying images'.

ETHICAL APPROVAL

All authors hereby declare that all experiments have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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