

BASAL CELL CARCINOMA ARISING IN AN EPIDERMAL CYST

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ABSTRACT

Although cutaneous epidermal cysts are common lesions, neoplastic transformation of their epithelium is rare. We report a case of basal cell carcinoma arising from an epidermal cyst on the scalp for 9 years. We emphasize on the need to examine all surgical specimens of cysts removed from sun exposed areas existing for many years and developing recent local changes in countries of high ultra-violet radiation.

Key words: Epidermal cyst, Basal cell carcinoma.

INTRODUCTION

Epidermal cysts of the skin are common lesions but the malignant transformation of their lining epithelium is rare¹⁻⁶. The transformation is usually in the form of squamous cell carcinoma^{4,5} and rarely basal cell carcinoma^{1-3,5,6}. We report the only case of basal cell carcinoma arising from an epidermal cyst of the scalp found during the period 1996 –2001 in the database of Salmaniya Medical Centre, Bahrain.

CASE REPORT

Among the 867 epidermal cysts diagnosed at the Department of Pathology, Salmaniya Medical Centre, Bahrain, between 1996-2001, there was only one case of basal cell carcinoma arising from these cysts. There

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were no squamous cell carcinoma or any other malignancy.

The patient was a 35-year- old Bahraini female who presented with soft, painless freely mobile scalp swelling with well-defined margins measuring 3x3 cm, which she had since 9 years. All her routine pre-operative laboratory investigations were within normal limits. The swelling was excised under local anaesthesia and submitted for histopathological examination. Gross examination showed a piece of skin with underlying soft tissue measuring 2.5x2.5x0.5 cm. There was a cut opened cyst measuring 2.5 cms in diameter in the underlying tissue containing flaky white soft material. Microscopy showed a dermal cyst filled with keratin and lined by keratinising squamous epithelium. There were multiple foci of oval neoplastic cells with hyperchromatic nuclei, arising from the basal cell layer of the cyst epithelium and forming islands with peripheral pallisading (Fig.1). Horn cysts and focal lymphocytic infiltrates were also noted. A diagnosis of basal cell carcinoma arising in an epidermal cyst was made.

DISCUSSION

What triggers the malignant transformation of the epidermal cysts into basal or squamous cell carcinoma is unknown although factors such as the race of the patient, prolonged irritation, exposure to solar ultraviolet radiation, and viral infection may be considered. It is therefore necessary to carefully examine epidermal cysts excised under these circumstances to rule out possible malignancy. Bahrain, set in a belt of very high solar energy intensity in the Middle East and clinicians in

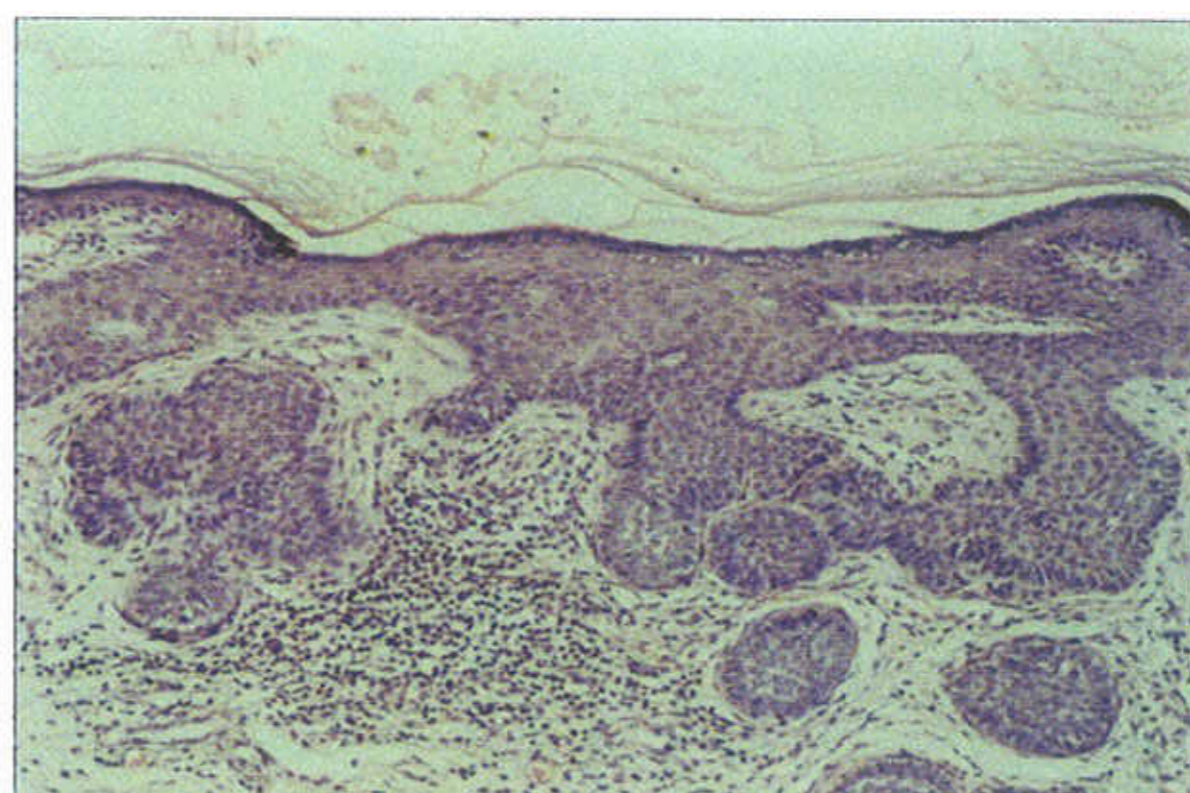


Figure 1. Basal cell carcinoma, arising from the basal layer of the squamous epithelium, lining the cyst.

this region must be alerted to consider malignant transformation of epidermal cysts especially of exposed areas like the face and scalp as in the present case. On the other hand, in all of the reported cases in the literature, the transformation arises after a long period of time ranging from 20 to 50 years^{2,3}, and in the present case the cyst existed for 9 years. This would mean that the malignant transformation is either slow or occurring late. Therefore, cysts existing for many years and developing recent local changes must also alert clinical attention. Clinically the transformation will rarely be suspected since changes in the size of the cyst, which may alert the attention, will always be attributed to the possibility of rupture and secondary infection not to mention that the incidence of the transformation itself is rare. Basal cell carcinoma is a slow growing locally invasive tumour and any malignant transformation within the cyst may have started long time before the clinical presentation.

In many histopathology laboratories with budgetary restraints, some surgical specimens (eg. hernial sacs, haemorrhoids, anal fissures, etc) including epidermal cysts are not normally processed for histological diagnosis. As a result, malignancies of these lesions will

be missed and a metastasis from a squamous cell carcinoma may be the first clinical presentation. Furthermore, incomplete excision of malignancies arising from these cysts, alerting further surgical intervention and follow-up to avoid recurrence, will only be discovered after histological assessment⁶. We recommend that all surgically removed specimens must be processed histologically and that regional lymph nodes are routinely examined clinically in all patients with cystic cutaneous lesions.

There are no specific microscopic features of basal cell carcinoma arising in an epidermal cyst to distinguish it from those arising elsewhere. It shows the usual histological appearance of nests and trabeculae of malignant basal cells with peripheral palisading and mitosis^{2,3}. Similarly, squamous cell carcinoma arising from these cysts is also similar to those arising from other skin lesions⁴.

CONCLUSION

Basal cell carcinoma arising in the wall of an epidermal cyst is very rare. Examination of all surgically removed cysts is important so as not to overlook the possibility of malignant transformation and to allow close follow-up for potential recurrence.

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