Eccrine spiradenoma of eyelid: case report

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SUMMARY A case report is presented of eccrine spiradenoma, a benign sweat gland tumour which, though not uncommon generally, is rare in the eyelid. The possibility of sweat gland tumour should be kept in mind in the diagnosis of eyelid tumours.

The eccrine spiradenoma is a benign neoplasms of the skin first described by Kersting and Helwig,1 who considered it to be a derivative of eccrine sweat glands. It usually presents as a solitary, intradermal, and painful nodule, the commonest sites being the chest and face.1 In the available literature we could find no case of eccrine spiradenoma of the eyelids. The following case report may therefore be the first from India.

Case report

A 55-year-old female presented in June 1984 with a nodule in left upper lid for the last two and a half years, which had been gradually increasing in size. It had ulcerated six months previously, causing pain and bleeding. The swelling measured 2.4 x 2 x 1.2 cm and involved lateral half of the left upper lid (Fig. 1). The growth was firm to hard in consistency and tender to touch. In an area 1 cm x 0.6 cm near the lid margin, including anterior half of the lid margin, the swelling was ulcerated. The margins of the ulcer were undermined, and the floor showed healthy granulation tissue.

An ophthalmic examination revealed nothing abnormal except for early lenticular opacities, and the patient’s vision was 6/18 in both the eyes. A general physical examination also showed nothing abnormal. There was no enlargement of auricular, cervical, or submandibular lymph nodes; the liver and lungs were normal.

Clinically an epithelioma of the eye lid was suspected, and a full-thickness wide excision of the left upper eyelid including the growth was carried out under local anaesthesia. Reconstruction of the upper lid was from a lower lid flap by the technique suggested by Cutler and Beard.2 Figs 2 and 3a, b show the first and second stages of the reconstruction operation.

Biopsy report

Gross description. The specimen submitted to the pathology department comprised a portion of excised lid and surrounding soft tissues measuring together 3.0 x 2.5 x 1.4 cm. The overlying skin revealed an ulcer which measured 1.0 cm x 0.5 cm and was skin thickness deep. On palpation a mass could be felt beneath the skin. Bisection revealed a lobulated and circumscribed tumour underneath skin which measured 2.2 x 1.8 x 1 cm. It was grey-white, firm, and had a rubbery surface.

Microscopic description (Figs 4 and 5). Sections stained with haematoxylin and eosin showed a tumour comprising lobules of various sizes in the corium. It had a sharply contrasting deep basophilia

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Fig. 1 Eccrine spiradenoma of left upper eyelid clinically resembling squamous cell epithelioma.

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Fig. 2  First stage of Cutler-Beard procedure for upper eyelid reconstruction.

Fig. 4  Tumour lobules present in the corium, with sharply contrasting deep basophilia (H-E, ×80).

Fig. 3 a, b  Six weeks after the second stage of reconstruction procedure with eyes open (a) and closed (b).

and did not connect with the overlying epidermis. The surrounding connective tissue was normal. The parenchymal tumour cells were of two types, arranged mostly in cords, whorls, and pseudoglandular formation. Cells of one type were large, light staining, closely packed, and at places surrounding a central lumen. Cells of the other type were small, arranged in cords, whorls, and around the periphery. In general there was insignificant inflammatory reaction within the tumour and the surrounding tissues, but in the area immediately beside and below the ulcer an extensive mononuclear cell infiltrate was noted. The histopathology was suggestive of eccrine spiradenoma.

Discussion

Tumours arising from the sweat apparatus of the eyelid are uncommon, and the differences in their structure have given rise to much confusion. A wide variety of descriptive terms have been applied to them. Histologically there are two subdivisions of the sweat glands—eccrine and apocrine. Eccrine glands are present throughout the skin but are most abundant in the palms, soles, and axillae. In the eyelid they are present both at the lid margin and in the dermis over the surface of the eyelid. On the other hand apocrine glands are found in only a few areas, mainly the axillae, round the nipples, and in the anogenital region, with occasionally a few on the abdomen and chest. Apart from these they are present as modified glands in the eyelids, breast, and external ear canal, where they are known as Moll's glands, mammary glands, and ceruminous glands respectively. Kersting and Helwig enumerated six sweat gland tumours without further grouping them according to type or portion of the sweat apparatus involved or the nature of the proliferation. In accordance with the nature of the growth Lever classified sweat gland tumours into four groups—hamartomas, adenomas, benign epitheliomas, and primary epitheliomas—but without taking account of part of the sweat apparatus involved. This was considered by Allen, who divided these tumours into two groups—ductal (syringal) and glandular. These were further divided by eccrine and apocrine differentiation. The eccrine spiradenoma falls into the category of benign epitheliomas according to the classification of Lever and is ductal in origin, being also termed a lobular syringoma.

Whatever classification or nomenclature is adopted, eccrine spiradenoma remains an established clinicopathological entity with a distinct histological appearance. However, the possibility of a primary basal cell epithelioma with eccrine differentiation and a lobular, hyalinised syringoma (cylindroma) should be included in the histological differential diagnosis. The former is identified by a
rim of basal cells arranged neatly in a radial pattern strongly reminiscent of the more or less vertically arranged basal cells forming the lowermost layer of the normal epidermis. The latter is characterised by conspicuous hyalised bands of collagen surrounding and intertwining among the lobules and its cells.

None of these features was seen in the present tumour, which comprised lobules of variable sizes having sharply contrasting basophilia and two types of tumour cells—one large light staining and closely packed, the other with compact nuclei arranged mostly at the periphery. In our case the microscopical picture is consistent with those described by other authors.\textsuperscript{1,4,6} Munger et al.\textsuperscript{6} confirmed the eccrine origin after an electron microscopy of a tumour having a similar light microscopic appearance.

Histochemistry and electron microscopy offer supplementary information. However, the criteria that appear to be decisive in differentiating the normal structures of the sweat apparatus are apparently not always applicable to neoplasms. In general, amylolphorylase, branching enzyme, succinic dehydrogenase, and leucine aminopeptidase are regarded as indicative of eccrine ducts and glands, whereas acid phosphatase and \( \beta \)-glucuronidase are stated to be characteristic of apocrine glands.\textsuperscript{3} Yet cylindroma, which is clearly of eccrine origin, has been found histochemically by some investigators\textsuperscript{4} to suggest an apocrine origin.

Kersting and Helwig\textsuperscript{1} and Munger et al.\textsuperscript{6} state that eccrine spiradenoma usually presents as a solitary intracutaneous nodule, often tender to touch, but occasionally there may be multiple tumours. In our case the clinical presentation as an ulcerated growth is quite different from the description of other workers.\textsuperscript{1,4} Consequently a clinical diagnosis of squamous cell epithelioma (a common tumour of the lid margin) was made.

Many classical cases of eccrine spiradenoma have been reported.\textsuperscript{1,4} However, none of these authors reported involvement of eyelids. Even Kersting and Helwig,\textsuperscript{1} who showed eccrine spiradenoma to be a distinct clinicopathological entity in a series of 134 cases, did not find a single tumour arising from the eyelid. However, certain other types of sweat gland tumours, such as porosyringoma\textsuperscript{7} and clear cell hidradenoma or myoepithelioma,\textsuperscript{8} have been reported in relation to eyelids. The rarity of the eccrine spiradenoma at that site made the present case worth reporting.

References

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