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SEBACEOMA-A CASE REPORT

Pathology

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ABSTRACT

Sebaceoma is a benign adnexal neoplasm showing sebaceous differentiation. This report details a case of a 41-year-old male presented to OPD with complaints of a raised lesion over scalp for 6 months. Excision biopsy was done and sent to our histopathology lab for definitive diagnosis by the clinician with the differential diagnosis of solitary trichoepithelioma. Histopathology showed mature sebocytes and greater than 50% of the tumour cells were basalaoid cells which is consistent with sebaceoma. Sebaceomas are rare skin adnexal neoplasms. It may be associated with Muir-Torre syndrome. It is characterised by multiple rounded cellular lobules and microcystic spaces predominantly composed of immature sebocytes admixed with mature sebocytes.

KEYWORDS

SEBACEOMA, MUIR-TORRE SYNDROME, SEBOCYTES.

INTRODUCTION:

Sebaceous glands are acinar exocrine glands that secretes sebum which lubricates the skin and hair, making them impermeable to water. It is a component of pilosebaceous unit of skin and found mostly on the face, upper back, scalp, and chest. Sebum is mainly composed of triglycerides, free fatty acids, squalene, cholesterol, wax esters, cholesterol esters, and diglycerides. Sebaceous gland activity peaks during puberty due to their high androgen receptor expression.[1]

Sebaceomas are rare skin adnexal neoplasm. It is a benign neoplasm showing sebaceous differentiation. It may be associated with Muir-Torre syndrome. They occur principally on the face and scalp. Clinically they present as solitary yellowish tan to orange papules. They may arise from the pre-existing naevus sebaceous. The lesions that are associated with Muir-Torre syndrome may be multifocal. It is histologically characterised by multiple rounded cellular lobules and microcystic spaces and is predominantly composed of immature sebocytes admixed with mature sebocytes. The most common differential diagnosis are sebaceous carcinoma and adenoma.[2] Sebaceoma is treated by total excision.

CASE REPORT:

A 41-year-old male presented with 6 months history of raised lesion over scalp. The patient also complaints of the pain over the lesion on touching. After clinical examination, excision biopsy was done from the lesion over scalp and sent to our histopathology lab with the differential diagnosis of solitary trichoepithelioma.

We received a single skin covered soft tissue bit of measurement 1x0.5 cm which was bisected and all embedded in one block. The histopathological examination showed a well circumscribed skin adnexal tumour occupying the reticular dermis. The cells were arranged in lobules and were predominantly monomorphic basaloid cells (>50%) admixed with haphazardly distributed mature sebocytes. Duct like structures and cystic areas containing holocrine glands with luminal secretions were also seen. There was no increase in mitosis or necrosis. These features were consistent with sebaceoma (benign skin adnexal tumour with sebaceous differentiation).

DISCUSSION:

Sebaceoma was previously called as sebaceous epithelioma. [3] The term sebaceoma was first coined by Troy in the year 1984. It is a rare tumour. Clinically, they present as a solitary circumscribed nodule often yellow in colour. Mostly the lesions are located on the face or scalp and rarely on ear and eyelid. Sebaceoma can arise from the preexisting nevus sebaceous. It may be multiple and can also occour in association with other sebaceous neoplasms and multiple visceral carcinomas in Muir-Torre syndrome.

A widely accepted theory suggests that alterations in the WNT/beta-catenin signalling pathway play a crucial role in the development of sebaceous tumours. Studies on transgenic mice, expressing a defective beta-catenin binding site in the lymphoid enhancer-binding factor (LEF-1) transcription factor, have demonstrated the spontaneous development of sebaceous skin tumors. Mutations in the LEF-1 gene have been observed in sebaceomas and sebaceous adenomas, while sebaceous carcinomas may exhibit complete silencing of the LEF-1 gene. [4,5]

In individuals with Muir-Torre syndrome and sebaceous gland neoplasms, germline mutations in DNA mismatch repair genes, particularly MSH2, have been reported. However, there seems to be no direct correlation between the presence of LEF-1 mutations and the loss of MSH2 expression, suggesting that they are not directly linked. [5,6]

Histopathologically, sebaceoma is composed of well circumscribed cellular lobules of various sizes centred in the reticular dermis. This neoplasm may contain duct like structures and cystic areas containing holocrine secretions; rarely they connect with the overlying epidermis. Cytologically, it consists mostly of small monomorphic basaloid cells with bland nuclear features admixed haphazardly with mature sebocytes. The sebocytes have abundant vacuolated cytoplasm , ovoid nuclei and scalloped nuclear membranes. Mitosis may be seen in immature component but atypical mitotic figures and necrosis are not seen. The surrounding dermis consists of dense eosinophilic connective tissue. The various type of growth patterns seen in sebaceomas are reticulated or rippled, cribriform and glandular configuration. EMA (Epithelial membrane antigen) is usually positive in clear cells.

It has low p53 and Ki-67. Differential diagnosis includes basal cell carcinoma with sebaceous differentiation, sebaceous carcinoma and sebaceous adenoma.[7] Basal cell carcinoma with sebaceous differentiations consists of the basal cells showing greater atypia and peripheral palisading with mucinous stroma and retraction artifact. It is positive for Ber-EP4.[8]

Sebaceous carcinoma shows sebocytes with greater cytologic atypia and pleomorphism. Mitotic figures are usually numerous and often atypical. Sebaceous adenomas show predominantly mature sebocytes than basaloid cells (>50% clear cells). These basaloid cells are confined to peripheral layers of sebaceous lobules.

The clinical presentation and histopathological examination of our case favoured the diagnosis of sebaceoma. Total excision of the tumour is curative and got excellent prognosis with low malignant potential. [9] Possible transformation to sebaceous carcinoma is seen rarely in longstanding cases. Patients who have associated Muir-Torre syndrome are at high risk of developing internal organ malignancies especially colon carcinoma.

CONCLUSION:

This case report is done to emphasize the fact that Sebaceoma is a rare benign skin adnexal tumor and due to its rareity its diagnosis is unsuspected clinically. The definitive diagnosis is made mostly on the histopathological examination of the lesion. Histopathology is the confirmatory for its diagnosis. Also, Muir-Torre syndrome to be ruled out in the diagnosed cases as it is associated with development of internal organ malignancies.

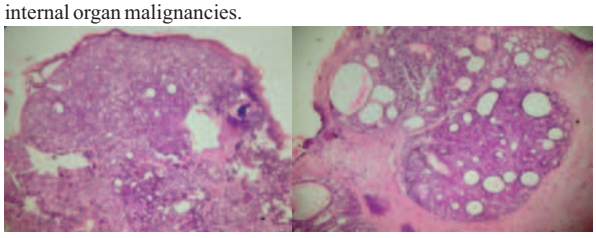

Fig1 **Fig2**

Figs 1 &2 -Well circumscribed skin adnexal tumour occupying the reticular dermis (haematoxylin -eosin, scanner view)

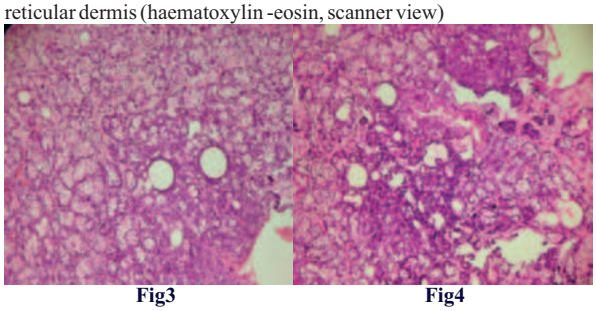

Fig3 **Fig4**

Figures 3 &4- Duct like structures and cystic areas containing holocrine glands with luminal secretions (haematoxylin -eosin Low power view)

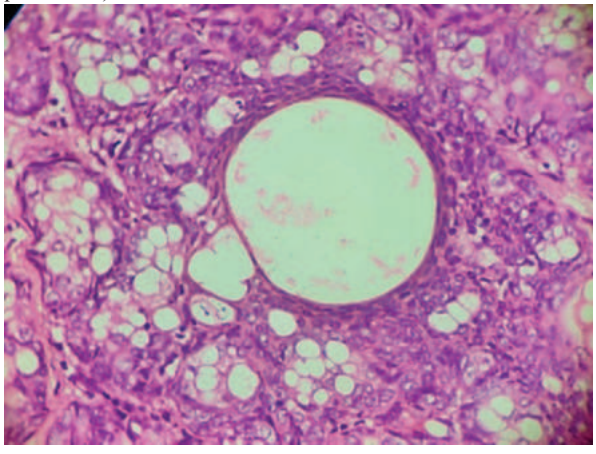

Figure 5- Monomorphic basaloid cells (>50%) admixed with haphazardly distributed mature sebocytes (haematoxylin -eosin High power view)

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