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ADENOID BASAL CELL CARCINOMA- RARE CASE REPORTS

Pathology

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ABSTRACT

Basal cell carcinoma (BCC) is the most common cutaneous malignancy, and most commonly seen over the sun exposed parts of the body. The adenoid basal cell carcinoma is a rare variant (1.3%) of conventional BCC with less aggressive nature. We herein reported case reports of two cases of adenoid Basal cell carcinoma. First case was 80 years old female presented with nodular lesion on left upper eyelid for last three and a half years, while other case was 56 years old male presented with painless nodule in axillary region for five years. On histological examination of both the cases, tumour mass showed connection with the overlying epidermis and consisted of nests and lobules of basaloid cells. These cells were arranged in adenoid and lacy pattern , showed peripheral palisading and retraction artefact between stroma and tumour nests. Diagnosis of both the cases were given as Adenoid Basal cell carcinoma (BCC). The diagnosis of adenoid basal cell carcinoma is important, because it is a rare, indolent variant of conventional BCC and majority of the cases reported as adenoid BCC have less aggressive behaviour and low potential to metastasis and recurrence.

KEYWORDS

INTRODUCTION

Basal cell carcinoma (BCC) is the most common cutaneous malignancy, constituting approximately 70% of all cancers of skin. It is firstly described by Jacob in 1827 (1). It is most commonly seen over the sun exposed parts of the body such as head , neck , face, nose , eyelids, inner canthus of eyes but it may also be seen at covered parts of body which are usually not subjected to sun exposure (2).

Clinically these lesions may present in different forms like papulo-nodular lesion, erythematous plaques and ulcerative lesions along with variable morphological or histological patterns such as keratotic, adenoid, sebaceous, baso-squamous/metatypical, pilar, apocrine, eccrine or fibroepithelial basal cell carcinoma. (1) The incidence of skin cancer is exponentially increasing worldwide, with some estimates reporting up to a 3% annual increase in incidence.(3)

The adenoid basal cell carcinoma is a rare variant (1.3% incidence) of conventional BCC with less aggressive nature (4). The typical adenoid BCC without admixture of other aggressive variants of BCC were similar to benign lesions and have no potential for metastasis and was not the sole cause of death in patients of BCC. We herein are reporting two such rare cases of adenoid BCC, one on usual location, another on unusual location and sharing almost similar histological features.

CASE REPORTS

CASE REPORT -1

A 80 years old female presented to the Ophthalmology outpatient department of LLR hospital Kanpur, with painful nodular lesion on left upper eyelid for last three and a half years. This lesion has suddenly started increasing in size over a duration of few months and become painful and ulcerated. The patient was farmer by occupation, which explains the long duration of sun exposure. There was no history of trauma or any surgery in the past.

CASE REPORT-2

A 56 years old male presented to the Surgery outpatient department of LLR hospital, Kanpur with complaints of painless nodule in axillary region for five years. Patient was asymptomatic without any relevant past and family history.

On general examination no regional lymph nodes were enlarged in both the patients. Routine blood and biochemical investigations were also within normal limit in both cases.

First case was clinically diagnosed as ulcerated Basal cell carcinoma (BCC), radiology and fine needle aspiration were not done. Patient was managed surgically and wide local excision of ulcerated nodule was carried out.

Second patient was clinically diagnosed as skin adenexal tumour . Patient was managed successfully by complete resection of the lesion with wide resection margins.

Both the specimens were sent for histopathological examination in Pathology department of GSVM Medical college. Here both specimens were fixed in 10% neutral buffered formalin. Processing was done by automated tissue processor, followed by tissue embedding , section cutting and staining with haematoxylin and eosin(H&E). All these steps were done according to standard protocol. Gross and microscopic features of both the specimen are given in table-1.

Table-1- Gross And Microscopic Features Of Cases

Case report no.	Clinical details	Gross features	Microscopic features	Diagnosis
Case report-1	A 80 years old female presented with painful nodular lesion on left upper eyelid	2x1 cm nodular tissue piece, partially covered with skin	Tumour consisting of nest and lobules of uniform sized basaloid cells, round to oval cells with hyperchromatic nuclei and scanty cytoplasm. Cells are arranged in adenoid and lacy pattern.	Adenoid Basal cell carcinoma (BCC)
Case report-2	A 56 years old male presented with complaints of painless nodule in axillary region	1.5x1.2 cm nodular tissue piece, partially covered with skin	Tumour mass consisting of uniform sized basaloid cells which are arranged in adenoid pattern and are round to oval cells with hyperchromatic nuclei and scanty cytoplasm showing peripheral palisading	Adenoid Basal cell carcinoma (BCC)

Gross examination of both the cases showed two nodular tissue pieces of 2x1 cm and 1.5x 1.2 dimensions respectively , partially covered with skin. Both the tissues were processed and slides were prepared for microscopic examination.

Histopathological examination of sections taken from case-1 show Tumour mass showing connection with the overlying epidermis and consisting of nest and lobules of basaloid cells which are round to oval cells with hyperchromatic nuclei and scant cytoplasm. these cells are arranged in adenoid and lacy pattern , showing peripheral palisading

and retraction artefact between stroma and tumour nests. dense lymphocytic infiltrate is also present in the stroma. (Image-1)

Sections taken from case-2 show tumour mass consisting of basaloid cells which are arranged in adenoid pattern and are round to oval cells with hyperchromatic nuclei and scanty cytoplasm showing peripheral palisading and retraction artefact from surrounding stroma. (Image-1)

So the diagnosis of both the cases were given as Adenoid Basal cell carcinoma (BCC).

Image-1- Microscopic Features Of Cases

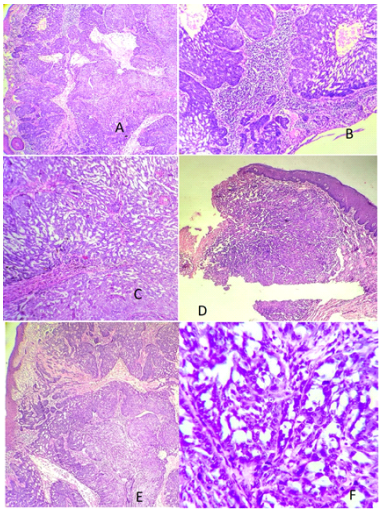

Image-1 – Microscopic features of cases (A) Tumour mass showing connection with the overlying epidermis and retraction artifacts (40x) (B) Nest and lobules of basaloid cells with peripheral palisading, surrounded by dense lymphocytic infiltrate (100x) (C) cells are arranged in adenoid and lacy pattern(100x) (D) section shows tumour mass consisting of basaloid cells (40x) (E) section shows connection with overlying epidermis and adenoid pattern of cells (40x) (F) section shows round to oval cells with hyperchromatic nuclei and scanty cytoplasm.(400x)

DISCUSSION

Basal cell carcinoma arises from basal cell layer of epidermis and it is also known as rodent ulcer due to it's local infiltrative nature. The basal cell carcinoma is most commonly observed on the head (70%) , followed by trunk (25%), penis, vulva or perianal skin. (5,6) In head region, around the eyes, basal cell carcinoma most commonly involves lower eyelid , medial canthus, upper eyelid and lateral canthus respectively and long exposure to the sunlight is an important risk factor for the development of BCC (7) A latency period of 20 to 50 years is typical between the time of ultraviolet radiation exposure to the development of BCC, so the incidence of BCC increases with proximity to the equator, although 33% BCC arises on unusual locations of body which are not exposed to sunlight (8) BCC constitutes approximately 65% of all the epithelial tumours of skin but causes very less cancer related deaths whereas squamous cell carcinoma is less common and have more potential to metastasis and causes more deaths .(9) It has variable clinical presentation along with many different histological variants.

Morphological variants like cystic, adenoid, morphoeiform, infundibulocystic , pigmented and miscellaneous are rare and account for approximately less than 10% of all BCC. (10) The proper histological diagnosis of morphological variants of BCC is helpful for planning adequate management and assessing prognosis. (11)

Adenoid variant of basal cell carcinoma has no site predilection and it has been reported at various sites like axillae, back, leg, inner canthus of eye, chin, forehead, cervix and prostate and it can present as a pigmented or nonpigmented nodule or ulcerative lesion.(12)

In our case reports, we have reported first case on common eye lid site and another one on the axillary region. The exact incidence of adenoid BCC is not known however Bastiaens et al reported an incidence of 1.3% . A recent study conducted by Hussain et al (2015) has reported an incidence of 6.67% of the adenoid BCC among all the histological subtypes of BCC of the eyelids (4,13)

On histopathological examination adenoid variant of BCC shows arrangement of cells in the intervening strands and radially around the islands of connective tissue, resulting in a tumour with lace like pattern, the lumina may be filled with colloidal substance or with an amorphous granular material but the secretory activity of the cells lining the lumen can not be delineated even on histochemical methods (14). Surgery is the mainstay of treatment with a margin of 0.5 to 1.0 cm around the lesion similar to other BCC . In addition to the surgery, various other modes of treatment are electrodessication, cryotherapy, radiation therapy, photodynamic therapy and pharmacological therapy. (11,12) The adenoid basal cell carcinoma is a rare, indolent variant of conventional BCC and majority of the cases reported as adenoid BCC have less aggressive behaviour and low potential to metastasis and recurrence. (15, 16) The typical adenoid BCC without admixture of other aggressive variants of BCC were similar to benign lesions and have no potential for metastasis and was not the sole cause of death in patients. (17)

Differential diagnosis include cutaneous adenoid-cystic carcinoma, direct extension of adenoid cystic carcinoma of salivary gland to the skin and primary cutaneous cribriform apocrine carcinoma. However on the basis of clinical presentation , morphological and immunohistochemical features, we can differentiate these entities from adenoid BCC. Connection to the overlying epidermis or adenexal structures, peripheral palisading of the basaloid islands of cells, monomorphous appearance of cells arranged in nests and tubules and retraction artefacts of the surrounding stroma favours the diagnosis of adenoid BCC.

CONCLUSION

These case reports have been documented in view of its rare occurrence among all variants of BCC and also due to unusual location of the second case and role of histopathological examination to establish correct diagnosis of this entity and help to initiate appropriate treatment for these lesions . The adenoid basal cell carcinoma is a rare, indolent variant of conventional BCC and majority of the cases reported as adenoid BCC have less aggressive behaviour and low potential to metastasis and recurrence.

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