

Interesting Case of Nipple Basal Cell Carcinoma with Meningioma - A Rare Case Report

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ABSTRACT

Basal cell carcinoma (BCC) is the most common type of skin cancer seen in sun exposed areas of head and neck. Nipple areola complex is a very rare site for this tumour. The BCC of nipple areolar complex has been suggested to be more aggressive with higher rate of metastasis to regional lymph nodes. Meningiomas are the most common intracranial tumour that are usually benign and slow growing, arising from meningotheial cells. This rare case report outlines the association of nipple-areolar complex BCC with frontotemporal meningioma in an elderly lady.

Keywords: Basal cell carcinoma, meningioma

INTRODUCTION

Basal cell carcinoma (BCC) is the most common type of skin cancer and is seen rarely on the nipple areolar complex in men and women (1). Exposure to ultraviolet light is the main risk factor for development of BCC. The BCC of nipple areolar complex (NAC) has been suggested to be more aggressive with higher rate of metastasis to regional lymph nodes (2). Meningiomas are the most common intracranial tumour that are usually benign and slow growing, which arises from meningotheial cells(3). Here we present a rare case of accompaniment of meningioma with basal cell carcinoma of nipple areolar complex in an elderly woman.

CASE REPORT

A 71-year-old female presented to the hospital with multiple episodes of seizures with vomiting. She had a history of on and

off headache. MRI Contrast Scan showed a large right basi frontolateral supraorbital and plenum sphenoidal extra axial lesion about 5x4cm with mass effect over frontal lobe and minimal midline shift.

She also complained of ulcerated lesion over right nipple with discharge since 6 months. Initially small in size over time it increased in size. On examination the lesion was nodular with ulcerated surface, measuring 3x2cm, having ill-defined margin, everted edges and indurated base (Figure 1A). Surrounding skin appeared normal. Clinically it was suspected as a case of Paget's disease of nipple with meningioma. Ultrasound of breast showed ill-defined mixed echoic lesion in right nipple areola complex with enlarged right axillary lymph node likely of reactive nature. Fronto temporal craniotomy with excision of the intracranial lesion along with wide local excision of nipple areolar

complex was done in a single set up. Both samples were sent for histopathological examination.

On gross examination excised nipple areolar complex specimen was measuring 7.5x4.5x3cm. Outer surface showed a proliferating tumour at nipple areolar

complex. On cut surface tumour was grey white to grey brown with focal pigmented area totally measuring 3.2x3.1x2.1cm (Fig 1B). A specimen of intracranial tumour was greyish white, irregular and measuring 2.8x2x1cm.



Figure 1A) Fungating and ulcerated lesion over nipple 1B) Cut surface of nipple areolar complex tumour showing grey white areas with focal pigmentation

Microscopy from nipple areolar complex tumour showed nodular proliferation of basaloid cells in epidermis and dermis with peripheral palisading and retraction spaces. Numerous mitotic figures noted. All margins were free of tumour. Diagnosis of nodular basal cell carcinoma was given (Fig 2). Microscopy of front of temporal lobe

lesion showed tumor cells in lobules composed of syncytial cells with uniform round to oval nuclei and eosinophilic cytoplasm. No evidence of atypia/necrosis/brain invasion/increased mitosis/cellularity in the sections studied. Diagnosis of WHO grade 1 meningotheial meningioma was given(Figure 3).

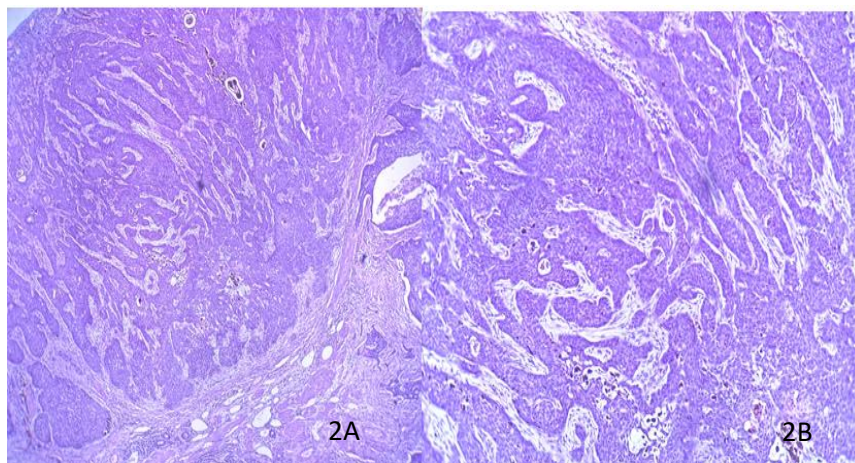


Figure 2A) BCC showing nodular proliferation of basaloid cells in epidermis and dermis (H & E,40X) 2B) Basaloid cells with retraction spaces (H & E,100X)

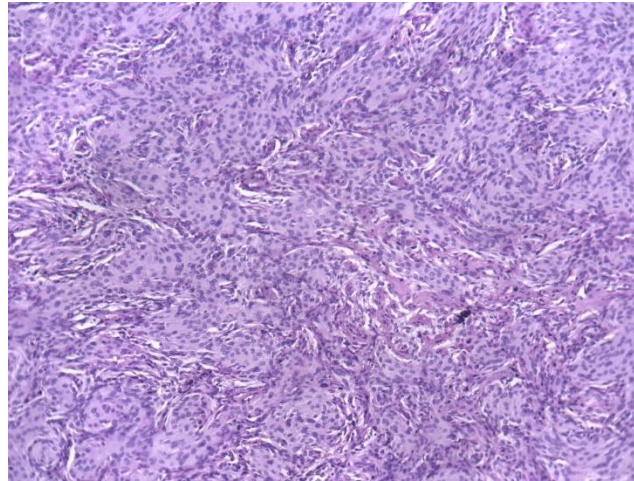


Figure 3) Meningioma showing syncytial cells with uniform round to oval nuclei and eosinophilic cytoplasm (H & E,100X)

DISCUSSION

Basal cell carcinoma frequently occurs in head and neck region. Since BCC lesions are quite similar clinically they can be easily misdiagnosed as Pagets disease, Bowens disease, malignant melanoma, chronic dermatitis and erosive adenomatosis. BCC of the breast should be considered as differential diagnosis of breast carcinomas (4). Zandpazandi et al reported a case of accompaniment of fibroblastic meningioma and scalp basal cell carcinoma(5).The present case was a rare association of meningotheial meningioma and basal cell carcinoma of NAC. No such association were previously reported in literature. BAP1 gene is predisposing to BCC, meningioma, melanoma, renal cell carcinoma. As per the hypothesis meningeal cell expresses SDF1 and CXCR4 to absorb stem cells which might cause aggregation of stem cells and produce meningioma mass. It may cause upregulation of CXCR4 and SDF1 in skin cells resulting in skin carcinomas (5). The genes involved in meningotheial meningioma are TRAF7, AKT1, SMO, PIK3CA, POLR2A.Familial syndromes associated with meningioma are neurofibromatosis 2, Gorlin syndrome, Cowden syndrome, Werner syndrome,BAP1 tumor predisposition syndrome, familial syndromes associated with SMARCB1 and SMARCE19,Li Fraumeni, Turcot, Gardener, Von Hippel Lindau, Rubinstein Taybi and multiple endocrine neoplasia 1(3).

Gorlin syndrome is a rare autosomal dominant condition with multiple basal cell nevi, mandibular cysts, plantar and palmar pits, vertebral and rib abnormalities and intracranial calcifications. It is caused by PTCH1 gene mutation which leads to higher risk of developing BCC and hypersensitivity to radiation induced tumorigenesis (6). The present case had no family history of BCC or BCC elsewhere in the body or any odontogenic cysts or skeletal abnormalities. Heckmann et al hypothesized that the disturbed cell matrix interaction at nipple areola complex could be a cofactor for the development of BCC. Overall rate of metastasis of nipple BCC ranges from 0.0028 to 0.5%. However 3 of the 31 reported cases of NAC have axillary lymph node enlargement with one histologically confirmed case(7).Taking the rich lymphatic flow in the NAC and high incidence of lymph node metastasis into consideration, sentinel lymph node navigation surgery with local resection should be considered as a part of surgical treatment(8). So timely diagnosis is of paramount importance as these lesions can clinically mimic variety of serious conditions including cutaneous extension of primary breast carcinoma (9).

CONCLUSION

Association of BCC of NAC with meningioma in elderly is rarely seen. NAC being a highly uncommon site for development of BCC as it commonly occurs

in sun exposed areas. So, a thorough clinical and histopathological examination is the key to diagnose such lesions. This case was rare as there were no previous reported cases of such associations in the literature.

Declaration by Authors

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