

Case Report

A rare presentation of primary cutaneous basaloid squamous cell carcinoma of scalp

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ABSTRACT

Basaloid squamous cell carcinoma (BSCC) is a rare and aggressive variant of squamous cell carcinoma (SCC). It has predilection for the upper aero digestive tract with common metastasis to regional lymph node and common distant metastasis to lungs. While metastasis to scalp has rarely been reported, primary occurrence of BSCC arising from scalp has hardly ever been reported. We are reporting a case of 70 year female patient, who presented with an ulceroproliferative growth in posterior scalp. Biopsy from the edge of growth was reported as malignant adnexal tumor. A wide local excision was done and that biopsy was reported as Basaloid squamous cell carcinoma. We intend to present this case, considering its rarity and its primary presentation in an very unusual and unique location for this variant.

Keywords: Basaloid squamous cell carcinoma, Scalp ulceroproliferative growth

INTRODUCTION

First ever description of Basaloid Squamous cell carcinoma (BSCC) was done in 1986 by Wain et.al in the upper aerodigestive tract.¹ In 2005, World Health Organisation (WHO) has considered BSCC as a separate clinico-pathological entity and described it as “an aggressive, high-grade variant of SCC composed of both basaloid and squamous components, with histopathologic appearance being divergent from well or moderately differentiated SCC”.

The common sites involved in (BSCC) are Larynx, Hypopharynx, tonsils, and base of tongue with less commonly affected sites being nose, paranasal sinus, external ear, submandibular region, esophagus, lung, anus, vulva, vagina, and the uterine cervix.^{2,3} In around two third of the patients, metastases to the regional lymph nodes have been reported, and in 35-50% of patients

distant metastases involving lungs, bone, skin and brain has been reported. However primary occurrence of BSCC arising from scalp has hardly ever been reported.⁴

CASE REPORT

A 70 year old female presented with an ulceroproliferative growth over right posterior scalp which was gradually increasing in size for 6 months. Examination revealed an ulcer of size 3 x 2.5 x 0.75 cm with everted edges, irregular margins, with minimal slough over the base.

The ulcer was not fixed to the underlying structures. A tender posterior auricular lymph node was also found and FNAC of the node was reported as reactive lymphadenitis which subsided with antibiotics. Edge biopsy of the tumor was reported as malignant adnexal tumor. Imaging revealed no attachment to the underlying structures and

absence of any other neck nodes. A wide local excision with a rotation flap was done. Post operatively the wound healed well and suture removal was done on POD-7. The histopathology of the excision biopsy was reported as basaloid squamous cell carcinoma with negative margins circumferentially all around the tumor.



Figure 1: Ulceroproliferative growth in Scalp.

A CT brain was done prior to surgery and post operatively after the HPE diagnosis, a CT chest and skeletal survey was done and there was no evidence of any metastasis in them. Hence no further intervention was planned and the patient is kept under our regular follow up.

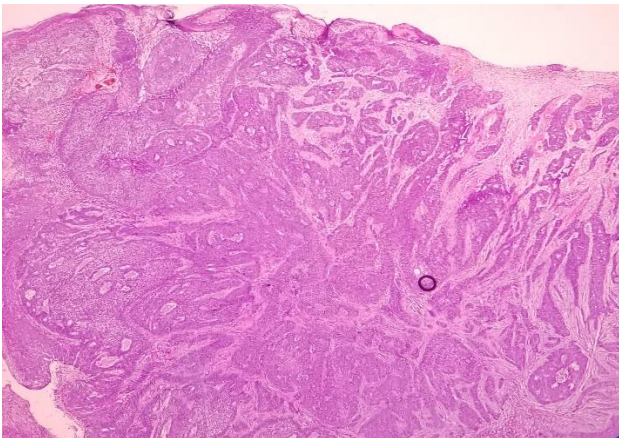


Figure 2: Low power magnification (40x) of Histopathology picture.

DISCUSSION

Skin cancers rarely presents with pathologic features demonstrating the presence of more than one tumor or more than one subtype of a single tumor and this can be from either 1) a collision tumor, in which more than one cutaneous malignancies appear in a single lesion or, 2) a metatypical tumor, in which the epidermal keratinocyte

differentiate into tumor cells of both basal cell carcinoma and squamous cell carcinoma, such as BSCC.⁶

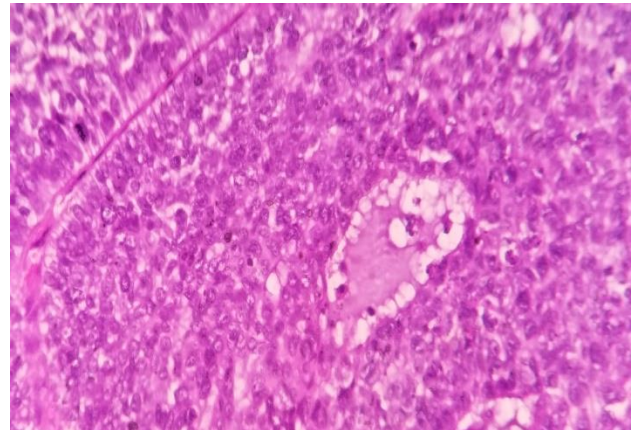


Figure 3: High power magnification (400x) of Histopathology picture.

But current WHO classification of these tumors state that the suggested precursor of the BSCC is a totipotent primitive cell located in the basal cell layer of the surface epithelium, or in the proximal ducts of minor salivary glands.⁷

First ever description of Basaloid Squamous cell carcinoma (BSCC) was done in 1986 by Wain et al in the upper aero digestive tract.¹ In 2005, World Health Organisation (WHO) has considered BSCC as a separate clinico-pathological entity and described it as “an aggressive, high-grade variant of SCC composed of both basaloid and squamous components, with histopathologic appearance being divergent from well or moderately differentiated SCC”.

BSCC can occur in both sexes, but more common in men 60-80 years of age with presentation mostly at an advanced stage at the time of diagnosis and has a poor prognosis.

The prognosis in BSCC depends on few variables of BSCC. Winzenburg et al reports suggest distant metastasis in 46% of cases where histology is purely basaloid or comedonecrosis has a bad prognosis. Lymph node involvement is another key factor in prognosis. Winzenburg et al showed a significant difference in survival of BSCC presenting with and without lymph node metastasis to have a survival of 18.6 and 47.6 Months respectively.⁵ Tobacco and alcohol abuse have been proven to be strong risk factors. Clinical signs and symptoms are not specific and related to tumor location.

Gross description of most reported BSCCs are flat, or elevated edge tumors with central ulceration. The most reliable tool for diagnosis is Histopathology. Immunohistochemistry may be of further help in the diagnosis.

BSCC has two components, i.e. basaloid and squamous cells. Interestingly, these tumors can be associated with spindle cell component as the third component. Distinctive features of BSCC, not found in SCC, are small cystic spaces containing PAS- and Alcian blue positive material, and stromal hyalinization. BSCC is always associated with a SCC component which can be either in-situ carcinoma, or invasive keratinizing SCC. The latter is usually located superficially; it may also present as a focal squamous differentiation within the basaloid tumor islands. The junction between the squamous and basaloid cells may be abrupt.

BSCC expresses cytokeratins and epithelial membrane antigen but the percentage of positive cells is highly variable. To avoid false-negative results, a cocktail of cytokeratin antibodies (i.e. CAM 5.2, AE1/3) is recommended. The antibody 34BE12, directed against high MW cytokeratins is most sensitive for the detection of basaloid cells.⁸

With the rarity of cutaneous BSCC the treatment guidelines are not very clear still. All treatment decisions should be customized considering particular factors like positive resection margins, age, reconstructive surgery and size parameters. Treatment includes curettage and electrodesiccation, wide local excision with postoperative margin assessment, Mohs microsurgery, radiation therapies and superficial therapies. Some authors have the opinion that BSCC requires a multimodal treatment including radical surgical excision, nodal dissection, radiotherapy, and often chemotherapy.⁹

In our patient, a wide local excision was done and rotation flap was developed. As the margins were found to be negative in histopathology report of the excision biopsy we did not proceed with further intervention and have kept the patient under our regular follow up.

CONCLUSION

Basaloid squamous cell carcinoma is a rare and aggressive clinical entity, which occurs mostly in upper aero digestive tract and frequently presenting in advanced stages, with very rare reporting in scalp. The main diagnosis is based on the histopathology and immunohistochemistry can further assist in diagnosis. Treatment needs to be customized individually based on various factors.

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