

## PICTORIAL

## INTRA-ORAL BASAL CELL CARCINOMA- AN IMMUNOHISTOCHEMICAL INTERPRETATION USING BER-EP4

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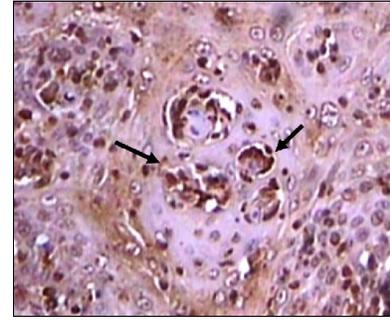
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**Figure-1: Clinical picture of the lesion**



**Figure-2: Islands of epithelium invading the stroma**



**Figure-3: Immuno-histochemical staining for Ber-EP4 showing strong positivity in tumour cells. ( X20)**

A 33 year old male presented with a painful non-healing growth of gingiva from eight months. Intra-oral examination revealed an indurated and erythematous lesion on gingiva with relation to tooth #29 to missing #30 measuring 2×1 cm. (Figure-1) Radiographic examination revealed a bone loss with relation to tooth #29 and #30. An incisional biopsy was performed and final diagnosis of peripheral ameloblastoma was given. At the time of excisional biopsy patient came up with increased swelling which remained ulcerated and the site of incisional biopsy was not healed. Histopathological examination of excisional biopsy showed numerous islands of basaloid cells budding off from the basal cell layer of epithelium. (Figure-2) These islands comprised of numerous apoptotic cells and mitotic figures. The peripheral cells of the islands demonstrated a palisaded arrangement. These features were similar to peripheral ameloblastoma, (PA)<sup>1</sup> we decided to do immuno-histochemical (IHC) staining for Ber-EP4 (to rule out PA). IHC stain for Ber-EP4 showed positive staining for the lesional cells of invading islands. (Figure-3). Based on IHC profile, a final diagnosis of mucosal basal cell carcinoma was rendered. One year follow up of the patient is uneventful.

Intra oral Basal cell carcinoma (IOBCC) is a rare and controversial entity.<sup>2</sup> Because of very close resemblance with PA it is often misdiagnosed on histopathological grounds, as in the current case. Ber-EP4 is a monoclonal antibody against cell surface glycoproteins (34 and 39 kDa) of most epithelial cells that reacts with epithelial tumours, with the exception of superficial layers of squamous epithelia.<sup>3</sup> The differentiation of IOBCC and PA is very important as IOBCC is a malignant and locally aggressive tumour. Ber EP4 is a reliable marker to differentiate IOBCC from PA. This case highlights the importance of immunohistochemistry in diagnosis.

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