Pigmented basal cell carcinoma - Adenoid variant

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ABSTRACT

Basal cell carcinoma (BCC) is the most common malignant tumor of skin. The tumour is commonly seen on nose, eyelids, at the inner canthus of eyes and behind the ears. Histological diagnosis and classifying BCCs into histological variants not only provide important information regarding low- and high-risk types of the malignancy but also has got a prognostic implication. Thus, reporting histopathological variant of any tumor including BCCs is essential in view of planning patient management.

Keywords: Basal cell carcinoma, adenoid, pigmented

INTRODUCTION

Jacob Arthur in 1827 coined a term "rodent ulcer" for this carcinoma . Sometimes it is also called as basal cell epithelioma [1,2]. BCC arises from the layer stratum basale. The most common cause can be chronic exposure to ultraviolet radiation. It is a slow growing malignant tumor, locally aggressive [3]. Metastases are found in less than 0.5% of the cases[4]. The most common site (80%) is head and neck[5].Basal cell carcinoma is the most common cutaneous malignanacy, arising from basally located cells of epidermis and pilosebaceousunit . Among all variants of BCC, pigmented basal cell carcinoma (PBCC) variety is about 6% and histopathologically similar to nodular BCC with increased melanization.Pigmented BCC exhibits increased melanization. PBCC is seen occasionally and represents a noduloulcerative lesion colonized by benign melanocytes.

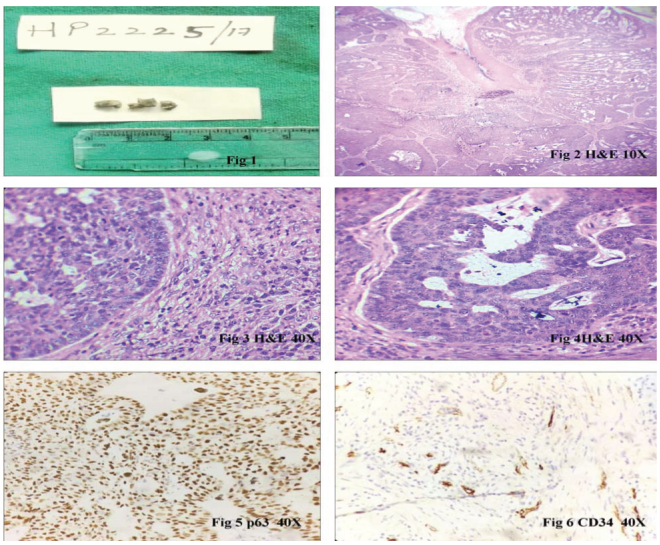
The melanin production imparts a tan, brown, black, or even bluish to the lesion and usually the pigment is not distributed uniformly, as it would be in a melanocytic nevus[6]. BCCs can exhibit both a variety of growth patterns (superficial, nodular, micronodular or infiltrating) and a variety of types of differentiation, such as adenoid, keratotic, sebaceous, basosquamous/metatypical, pilar, apocrine, eccrine or fibroepithelial[4]. Clinically, pigmented BCC may simulate melanoma.

CASE REPORT

A 54yr old female developed a small swelling behind the left ear one year back. On examination, the swelling was 2x1x1 cm , fixed with irregular borders, necrotic centre, firm in consistency. No regional lymphadenopathy noted. Systemic examination was normal. Surgery was done and sent for Histopathological examination.

On gross examination, 3 small soft tissue bits were received, largest measuring 1x0.5x0.5 cm. The soft tissue bits were externally skin covered. On cut section, grey white with focal grey black areas were seen. It was firm in consistency.

[Figure 1]



On microscopic examination, sections studied show epidermis lined by keratinized stratified squamous epithelium showing parakeratosis and thinned out at places. Tumour tissue is present in the dermis extending upto deep dermis but subcutaneous tissue is free.[Figure 2,3] The tumour tissue is in the form of solid nests, nodules, islands, tubules and glands with central cystic spaces surrounded by fibromyxoidstroma with acute and chronic inflammatory infiltrate. Individual cells are monotonous, small, round to oval with hyperchromatic

nuclei and indistinct cytoplasm. Few islands show peripheral palisading of nuclei.[Figure 4] There are retraction clefts between tumour islands and stroma. There is intracellular and extracellular pigment deposition with 4-5 mitotic figure/hpf.

Based on the morphology, basaloid cell features, connection with epidermis, pigmentation and basaloid cells IHC expression for p63 [Figure 5] and absence of CD34 [Figure 6], a diagnosis of pigmented basal cell carcinoma– adenoid variant was made.

DISCUSSION

This case of pigmented basal cell carcinoma shares its clinical pattern with melanoma, whereas its microscopic features overlap with adenoid cystic carcinoma (ACC) and trichoepithelioma. ACCs originate most commonly in the major and minor salivary glands. Rare primary locations include the breast, the uterine cervix, bronchi and the skin. ACC are characterized by basaloid cells in the mid- to deep dermis in cords, tubules, cribriform pattern cystic spaces. Lack of connection to the overlying epidermis or adnexal structures and perineural invasion distinguish it from adenoid BCC.

Trichoepithelioma is a tumour of the follicular epithelium. The tumour is comprised of multiple nodules situated within the dermis . Horn cysts, abortive hair follicles and calcification are frequently seen.IHC is a helpful adjunct in differentiating it from trichoepithelioma.

Histological diagnosis is imperative in pigmented basal cell carcinoma because the treatment and prognosis is remarkably different to its clinical simulator, melanoma. Similiarly, basal cell carcinoma should be differentiated from trichoepithelioma as the former is malignant and locally invasive whereas the latter is benign.

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