Section: Pathology

Case Series

A RETROSPECTIVE SINGLE CENTRE CASE SERIES ON HISTO-MORPHOLOGICAL CARICATURES OF BASAL CELL CARCINOMA

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Abstract

Basal cell carcinoma (BCC) is the most common non-melanocytic skin cancer, often found in sun-exposed areas, though a third of cases occur in non-sun-exposed regions. Despite its locally destructive nature, metastasis is rare. This study aims to distinguish true BCC from mimicking basaloid tumors such as trichoepithelioma, seborrheic keratosis, and basaloid squamous cell carcinoma through histomorphological analysis. A retrospective review of 15 cases conducted at NMCH, Sasaram, evaluated tissue morphology, cellular architecture, and stromal changes. BCC was diagnosed in 40% of cases, followed by seborrheic keratosis (26.6%), basaloid squamous cell carcinoma (20%), trichoepithelioma (6.6%), and syringoma (6.6%). The head-neck region was the most common site of BCC involvement. The findings underscore the critical role of histopathological evaluation using H&E-stained sections in achieving accurate diagnoses, with immunohistochemistry serving as a supportive diagnostic tool. Awareness of BCC mimics is essential to reduce diagnostic errors, enabling timely and appropriate therapeutic interventions that can significantly mitigate patient morbidity.

INTRODUCTION

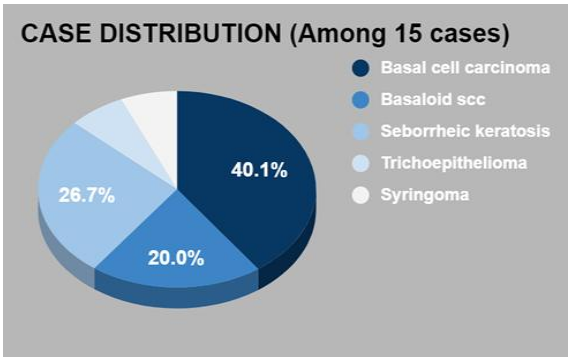
Basal cell carcinoma (BCC), first described by Jacob in 1927,[1] is the most common non-melanocytic cutaneous neoplasm.[2] BCC is exclusively seen on sun -exposed areas,[3] but about 1/3rd occurs in non-sun exposed areas. Although BCC may be locally destructive, metastasis was found only in 0.5% cases.[4,5] Usually, basaloid tumors that may mimic BCC include; trichoepithelioma, trichoblastoma, syringoma, seborrheic keratosis, basaloid squamous cell carcinoma, etc.[5,6]

MATERIALS AND METHODS

Aim is to delineate histomorphological characteristics that differentiate lesions mimicking BCC from true BCC by analyzing tissue morphology, hence minimizing diagnostic errors and guiding appropriate treatment decisions for patients with lesions resembling BCC.

It is a retrospective analysis along with integration of histomorphological data with clinical information conducted in the Department of Pathology (NMCH), Sasaram for a comprehensive diagnostic interpretation and systemic assessment of cellular architecture, cytologic atypia, stromal changes and differentiation patterns.

RESULTS



Among 15 patients analyzed, 40% cases were diagnosed as basal cell carcinoma followed by seborrheic keratosis (26.6%), basaloid squamous cell carcinoma (20%), trichoepithelioma (6.6%) and syringoma (6.6%). Head-neck region was the most

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common site of involvement for basal cell carcinoma[2].

DISCUSSION

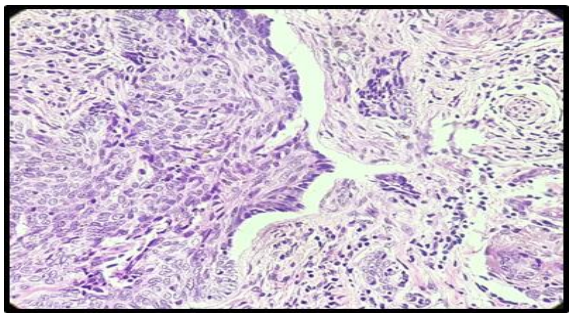

Figure 1: Basal cell carcinoma, basaloid cells with nuclear palisading and retraction cleft; 40X magnification; H&E stain.

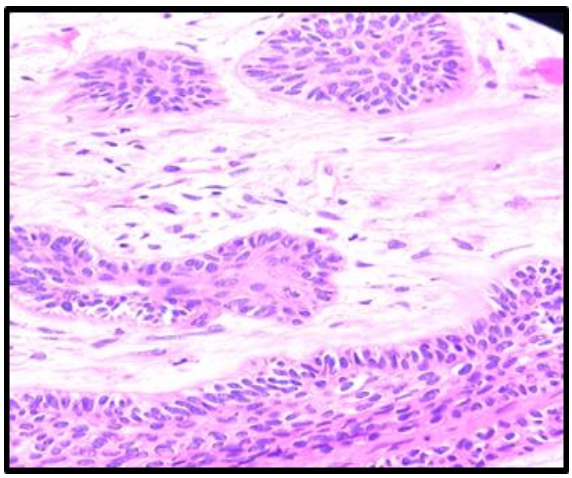

Figure 2: Basal cell carcinoma, nests of basaloid cells with high N/C ratio & loose stroma; 40X magnification; H&E stain.

Table 1: Tabular illustration of the histological similarities and differences between BCC and its caricatures.

Histologic features	Classic bcc	Keratotic bcc	Adenoid bcc	Basaloid bcc	Seborrheic keratosis	Tricho-epthelioma	Syringoma
Palisading	Present	Present	Present	Absent	Absent	Present	Absent
Retraction cleft	Present	Present	Present	Absent	Absent	Absent	Absent
Horn cyst	Absent	Present	Absent	Absent	Present	Present	Absent
Pseudo-gland formation	Absent	Absent	Present	Absent	Absent	Absent	Absent
Ductal differentiation	Absent	Absent	Absent	Absent	Absent	Absent	Present

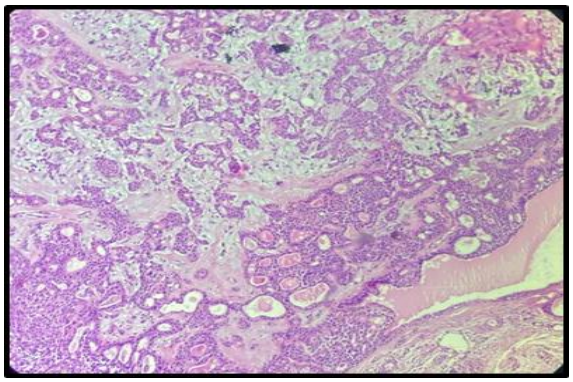

Figure 3: Adenoid BCC, pseudoglandular pattern of basaloid cells with mucinous stroma; 10X magnification; H&E stain.

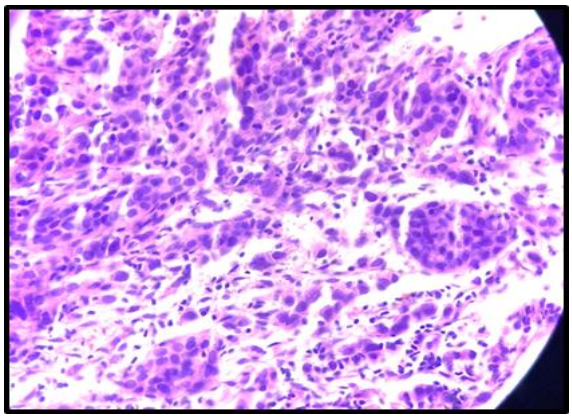

Figure 5: Poorly differentiated basaloid SCC, round to oval basaloid like cells; 40X magnification; H&E stain.

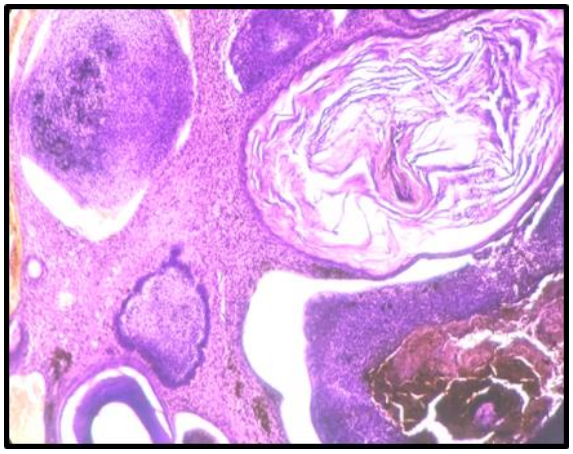

Figure 4: Keratotic BCC, large lobules of basaloid cells with nuclear palisading, retraction cleft along with horn cysts; 40X magnification; H&E stain.

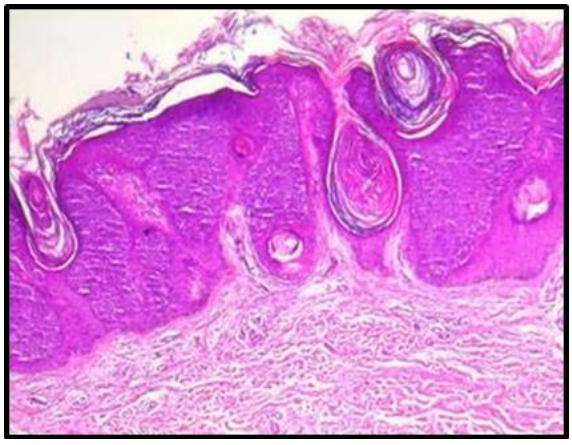

Figure 6: Seborrheic keratosis, proliferation of basaloid keratinocytes without dysplasia, pseudohorn cysts; 10X magnification; H&E stain.

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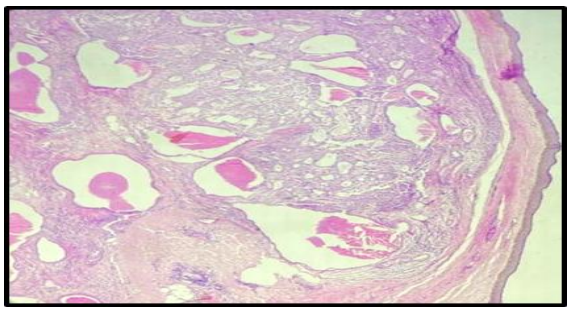

Figure 7: Syringoma, proliferation of basaloid cells forming comma or tadpole shaped ductules with eosinophilic cuticle; 10X magnification; H&E stain.

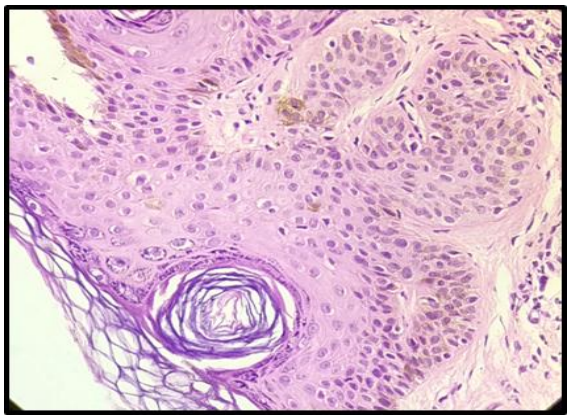

Figure 8: Trichoepithelioma, superficial nests of basaloid (small spindle) cells with keratin horn cysts; 40X magnification; H&E stain.

CONCLUSION

Would like to conclude that histological criteria applied to H&E sections remain the cornerstone of diagnosis, although immunohistochemistry has always been useful adjunct. Early detection and appropriate treatment can reduce morbidity. Awareness of potential mimics is critical to avoid misdiagnosis and resulting inappropriate management.[5]

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