

KNOW YOUR FIELD

Basaloid squamous cell carcinoma

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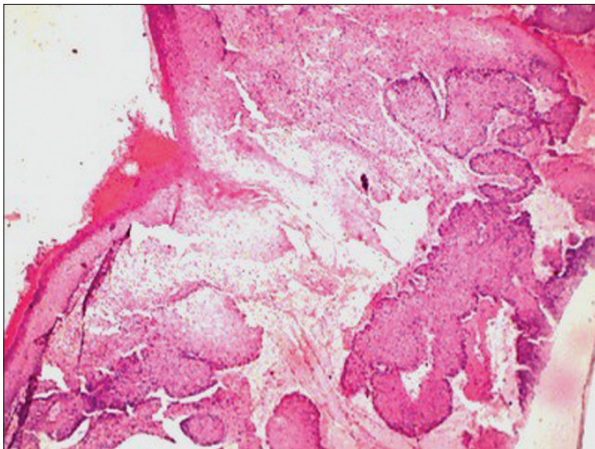


Figure 1: Surface epithelium showing invasion into the connective tissue (H and E, $\times 4$)

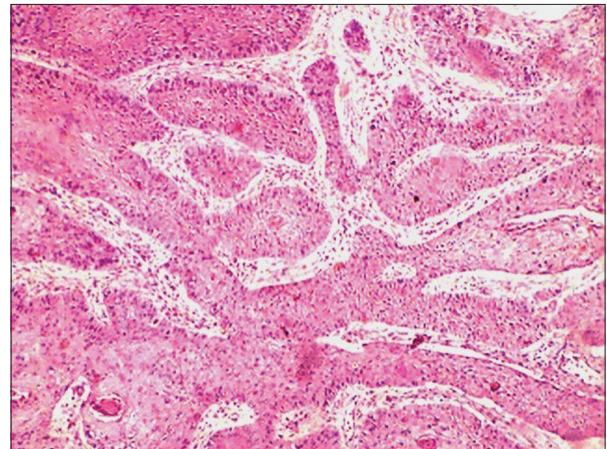


Figure 2: Infiltrating strands of tumor epithelial cells showing keratin pearl formation and mitotic figures (H and E, $\times 10$)

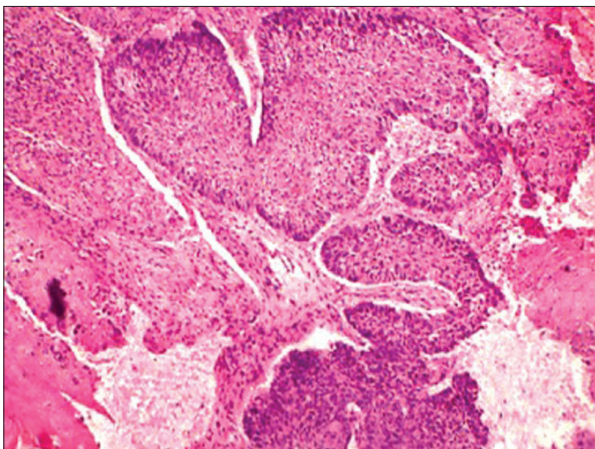


Figure 3: Islands showing peripheral palisading of basaloid cells (H and E, $\times 10$)

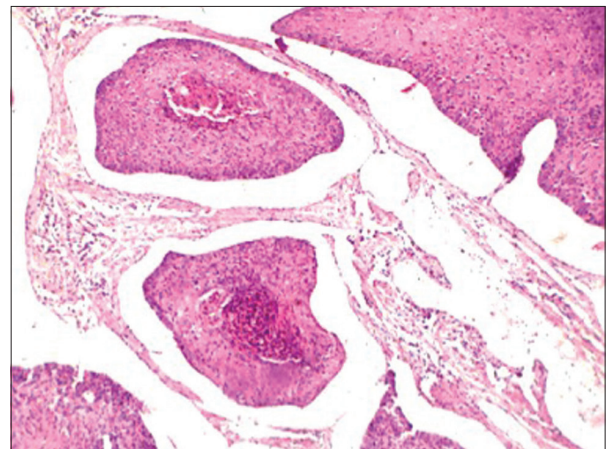


Figure 4: Tumor islands showing comedo-like necrosis (H and E, $\times 10$)

CLINICAL FEATURES

A 56-year-old male patient reported with the chief complaint

of ill-fitting lower dentures. The patient was habituated to tobacco and pan chewing for the past 30 years. On clinical examination, a proliferative verrucous growth was noticed in the lower anterior region, extending from 33 to 43 and crossing the midline. The lesion was firm in consistency and nontender.

HISTOPATHOLOGY

- Superficial parakeratinized stratified squamous surface epithelium is seen invading the underlying connective tissue [Figure 1].

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- The connective tissue stroma shows strands and islands of neoplastic epithelial cells. These islands show peripheral palisading basaloid-appearing cells with hyperchromatic nuclei, scanty cytoplasm, and central comedo-like necrosis [Figures 2-5].
- Keratin pearl formation and mitotic figures are evident in the infiltrating strands [Figure 6].
- There is a squamous cell component interspersed among the basaloid islands.
- The stroma shows chronic inflammatory cell infiltration.

DIFFERENTIAL DIAGNOSIS

- Basal cell carcinoma
- Adenoid cystic carcinoma (solid variant)
- Adenosquamous carcinoma
- Basal cell adenocarcinoma
- Salivary duct carcinoma
- Neuroendocrine carcinoma

Adenoid cystic carcinoma (solid type)

- Neoplastic myoepithelial and ductal cells are present.
- Groups of cuboidal cells are seen, with dark nuclei and little tendency towards duct or cyst formation.
- Squamous cell component and keratin pearl formation is absent.
- Tumor cells show a swirling arrangement around the nerve bundles, indicating perineural invasion.

Adenosquamous carcinoma

- Surface squamous cell component and deeper glandular component are more distinct.
- Glandular structures are lined by basaloid, columnar, or mucin-secreting cells.

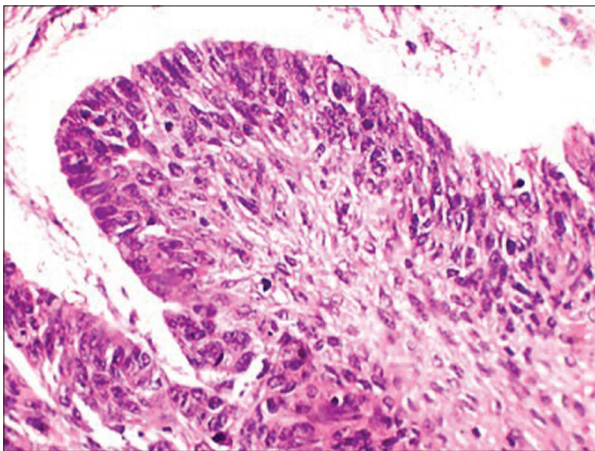


Figure 5: Tumor islands showing palisaded arrangement of peripheral basaloid cells (H and E, ×40)

- Intracytoplasmic mucin demonstrated by mucicarmine staining helps to differentiate this from the variants of squamous cell carcinoma that show a pseudoglandular pattern of differentiation.

Basal cell carcinoma

- Nests of uniform-appearing tumor cells with scanty cytoplasm and large hyperchromatic oval nuclei, which shows peripheral palisading.
- Increased mucin is present in the surrounding stroma, with cleft artifact occurring between tumor nests and surrounding stroma because of shrinkage of mucin during fixation and staining.
- Pseudoglandular change and pigmented variants are noted occasionally.

Basal cell adenocarcinoma

- Two forms of epithelial cells are seen, usually intermingled with each other – small round cells with scanty cytoplasm and dark basophilic nuclei and large polygonal cell with pale basophilic cytoplasm.
- For the diagnosis of carcinoma there should be more than 4–5 mitotic figures per 10 high-power fields.

Basal cell ameloblastoma

- Islands of odontogenic epithelium lined peripherally by basaloid cells that tend to be cuboidal rather than columnar, surrounding central nests of uniform basaloid-appearing cells.
- Absence of central comedo necrosis and any squamous component.

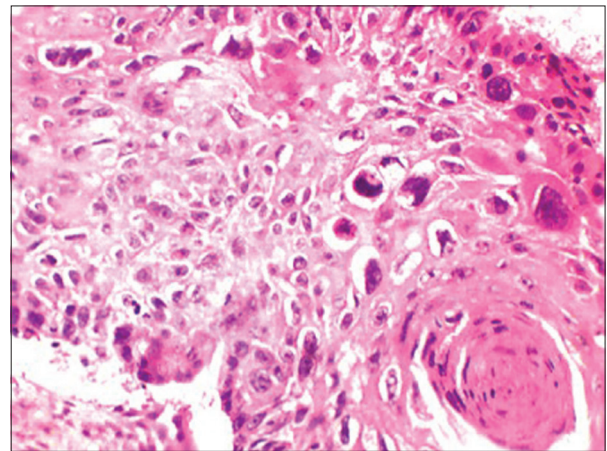


Figure 6: Photomicrograph showing mitotic figures and nuclear and cellular atypia (H and E, ×40)

Salivary duct carcinoma

- Tumor islands with large central cystic spaces with comedo type of necrosis and a several-cell-layers-thick peripheral rim of tumor cells that are cuboidal/polygonal and have a moderate amount of eosinophilic cytoplasm.
- Perineural and perivascular invasion is common.

FINAL DIAGNOSIS

Basaloid squamous cell carcinoma

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