

Coexistence of Nodular and Morpheaform Basal Cell Carcinoma in the Left Nasal Region of a 92-Year-Old Male: A Histopathological Case Report

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Abstract: Background: Basal cell carcinoma (BCC) is the most common cutaneous malignancy and exhibits considerable histopathological heterogeneity. Nodular BCC is characterized by basaloid tumour nests with peripheral palisading and stromal clefting, whereas morpheaform BCC demonstrates infiltrative strands and cords of basaloid cells within dense sclerotic stroma. Case Presentation: A 92-year-old male presented with a gradually enlarging lesion over the left nasal region for approximately two years. Clinical examination revealed an ulcerative lesion measuring approximately 3 × 2 cm. Wide local excision with flap reconstruction was performed. Three tissue specimens obtained from the left nasal region were submitted for histopathological examination. Containers 1 and 2 demonstrated nodular BCC, characterized by basaloid tumour lobules with peripheral palisading and stromal clefting. Container 3 revealed morpheaform BCC, characterized by irregular strands and cords of basaloid cells infiltrating dense sclerotic stroma. The surgical excision margins were free of tumour. The immediate postoperative course was satisfactory, without documented major complications. Conclusion: This case highlights the coexistence of nodular and morpheaform histopathological patterns of BCC within the same nasal region. Recognition of the infiltrative morpheaform pattern is particularly important for appropriate surgical management and postoperative surveillance.

Keywords: Basal cell carcinoma; Nodular basal cell carcinoma; Morpheaform basal cell carcinoma; Histopathological heterogeneity; Nasal neoplasm

1. Introduction

Basal cell carcinoma (BCC) is the most frequently diagnosed cutaneous malignancy worldwide and represents a major proportion of non-melanoma skin cancers. It predominantly affects elderly individuals and occurs most commonly in sun-exposed areas, particularly the head and neck region. Although BCC generally demonstrates slow growth and an exceptionally low metastatic potential, progressive local invasion may cause considerable tissue destruction, especially when lesions involve anatomically sensitive structures such as the nose, eyelids, and ears.¹

BCC exhibits substantial clinical and histopathological heterogeneity. Recognized histological subtypes include nodular, superficial, micronodular, infiltrative, morpheaform, and basosquamous variants. These subtypes differ in their architectural characteristics, stromal interactions, and risk of local recurrence. Nodular BCC generally demonstrates relatively circumscribed tumour nests, whereas infiltrative and morpheaform variants exhibit poorly defined microscopic boundaries and greater potential for subclinical extension.²

Histopathological classification is important for determining tumour aggressiveness and guiding treatment. Fernández-Figueras et al. emphasized the clinical relevance of distinguishing aggressive growth patterns and proposed a simplified histopathological classification to improve diagnostic reproducibility.³ Nodular BCC typically demonstrates lobules of basaloid cells with peripheral nuclear palisading and stromal retraction clefts. In contrast,

morpheaform BCC is characterized by thin, irregular strands and small nests of basaloid cells infiltrating a densely fibrotic or sclerotic stroma.⁴

Different histological patterns may coexist within an individual BCC, reflecting the morphological diversity of these tumours. Recognition of an aggressive component is particularly important because it may influence surgical margin assessment, treatment planning, and postoperative surveillance. The nasal region presents additional challenges because complete tumour excision must be balanced against preservation of function and cosmetic appearance.

We report a case of a 92-year-old male with BCC involving the left nasal region, in whom histopathological examination of three separately submitted specimens demonstrated two distinct morphological patterns: nodular and morpheaform BCC. The case highlights the importance of comprehensive histopathological examination and clinicopathological correlation.

2. Case Presentation

A 92-year-old male presented to the Department of Otorhinolaryngology at Maharaja Agrasen Medical College and Hospital, Agroha, Hisar, with a chief complaint of a gradually enlarging mass over the left side of the nose for approximately two years.

The patient reported progressive enlargement of the lesion without associated pain or preceding trauma. His medical

history was significant for hypertension for approximately eight years, for which he was receiving regular medication. He also reported a history of excision of a previous lesion approximately two years earlier and cataract surgery approximately eight years earlier. There was no documented history of diabetes mellitus, bronchial asthma, or tuberculosis. No history of smoking or alcohol consumption was reported.

On general examination, the patient was conscious and oriented, with a pulse rate of approximately 84 beats/min, blood pressure of 112/70 mmHg, and oxygen saturation of 97% on room air.

Local examination revealed an ulcerative lesion measuring approximately 3×2 cm over the left side of the nose. An additional blackish nodular lesion measuring approximately 2×2 cm was also noted over the inferior aspect of the right side of the nose. Both lesions were non-tender, and no active discharge was documented. Based on the clinical findings, a provisional diagnosis of BCC involving the nasal region was made. The present report focuses on the histopathological findings of the specimens obtained from the left nasal region.

Following preoperative evaluation, the patient underwent wide local excision of the lesion involving the left nasal region with flap reconstruction on 10 February 2026. The operative procedure involved preparation of the surgical field, marking of the lesion, excision of the affected tissue, elevation of a reconstructive flap, achievement of haemostasis, and closure of the resulting surgical defect.

Three tissue specimens obtained from the left nasal region were submitted for histopathological examination in separately labelled containers. The specimens were received by the Department of Pathology on 13 February 2026.

Gross Examination

The first container contained a grey-white to grey-brown soft tissue fragment measuring $0.2 \times 0.1 \times 0.1$ cm.

The second container contained a skin-covered tissue fragment with hair measuring $1.5 \times 1.0 \times 0.5$ cm. On sectioning, the cut surface appeared grey-white to grey-brown.

The third container contained a grey-brown to grey-black soft tissue fragment measuring $3.0 \times 2.0 \times 1.0$ cm. On sectioning, the cut surface appeared grey-brown to grey-black.

All three specimens were processed for routine histopathological examination.

Histopathological Examination

Microscopic examination of sections from the first and second containers revealed keratinized stratified squamous epithelium with underlying dermal tumour lobules composed of atypical basaloid cells arising from the basal layer of the epidermis. The tumour cells exhibited a high nuclear-to-cytoplasmic ratio, irregular nuclear membranes, coarse chromatin, and scant amphophilic cytoplasm. Characteristic peripheral nuclear palisading and stromal clefting were identified. The surrounding stroma showed fibromyxoid changes. These findings were consistent with nodular basal cell carcinoma.

Sections from the third container demonstrated a distinct infiltrative architectural pattern. The tumour was composed of small irregular nests, strands, and cords of basaloid cells infiltrating the surrounding dermal stroma. The neoplastic cells exhibited hyperchromatic nuclei, a high nuclear-to-cytoplasmic ratio, irregular nuclear membranes, inconspicuous nucleoli, and scant cytoplasm. Mild peripheral palisading was observed in some tumour nests. The surrounding stroma was densely sclerotic and fibrotic, with focal infiltration of tumour cells between collagen bundles in an irregular, haphazard arrangement. These findings were consistent with morpheaform basal cell carcinoma.

Histopathological examination therefore demonstrated two distinct morphological patterns of BCC in specimens obtained from the same left nasal region. Containers 1 and 2 exhibited features of nodular BCC, whereas container 3 demonstrated characteristic features of morpheaform BCC. The surgical excision margins were free of tumour (Figure 1).

The findings established histopathological heterogeneity within specimens obtained from the same anatomical region. However, the precise spatial relationship between the nodular and morpheaform components could not be established from the separately submitted specimens.

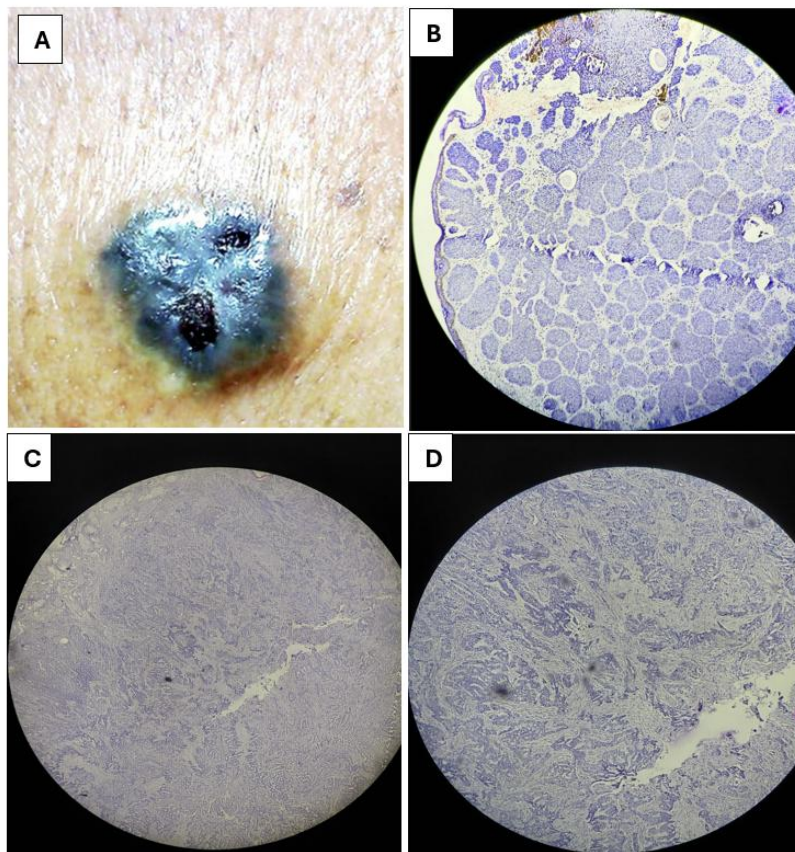


Figure 1: Clinical and histopathological features of nodular and morpheaform basal cell carcinoma. (A) Clinical appearance of a pigmented nodular lesion with focal surface ulceration. (B) Nodular basal cell carcinoma showing multiple nests and lobules of basaloid tumour cells with stromal clefting (H&E, 10x). (C) Morpheaform basal cell carcinoma showing irregular infiltrating strands and nests of basaloid cells within a fibrous stroma (H&E, 4x). (D) Higher magnification of morpheaform basal cell carcinoma demonstrating infiltrating cords and strands of basaloid cells within dense sclerotic stroma (H&E, 10x).

Postoperative Course

Following surgery, the patient underwent regular postoperative monitoring and wound assessment. Treatment included prescribed antibiotics, analgesics, wound care, and supportive management. During the documented postoperative period, the patient remained conscious and oriented, with stable vital signs. No major immediate postoperative complications were recorded. By postoperative day five, the patient remained clinically stable, with no active bleeding documented. Long-term postoperative follow-up data regarding local recurrence or additional treatment were not available at the time of manuscript preparation.

3. Discussion

Basal cell carcinoma is characterized by considerable morphological diversity, with different histological subtypes demonstrating varying degrees of local aggressiveness. Although most BCCs follow an indolent clinical course, infiltrative variants may cause substantial tissue destruction and present challenges in achieving complete surgical clearance. Histopathological evaluation therefore plays a central role in diagnosis, risk assessment, and treatment planning.¹

The nodular subtype is among the most frequently encountered forms of BCC and typically consists of rounded or lobulated nests of basaloid cells extending into the dermis.

Characteristic microscopic findings include peripheral nuclear palisading, stromal retraction clefts, and a fibromyxoid stromal background. These features were observed in the first and second specimens in the present case, supporting the diagnosis of nodular BCC.

Morpheaform BCC, also referred to as sclerosing or fibrosing BCC, represents an aggressive histological pattern. It is characterized by narrow, irregular strands and small nests of basaloid cells infiltrating dense collagenized stroma. The tumour may extend between collagen bundles and beyond clinically apparent margins, making complete excision more challenging. Conte et al., in their systematic review, emphasized the infiltrative architecture and clinical significance of morpheaform BCC, particularly its association with local tissue destruction and recurrence.⁴

In the present case, the third specimen demonstrated irregular strands and cords of basaloid cells infiltrating densely sclerotic stroma. These findings were consistent with morpheaform BCC and contrasted with the relatively circumscribed nodular architecture identified in the other specimens.

Richman and Penneys examined the histological characteristics of morpheaform BCC and distinguished pure morpheaform lesions from complex lesions containing additional histological patterns. Their observations

demonstrated that morpheaform morphology may occur independently or alongside nodular and other growth patterns.⁵ This distinction is particularly relevant when interpreting multiple specimens obtained from the same anatomical region.

Histological heterogeneity in BCC has been extensively investigated. Sexton et al. evaluated 1,039 consecutive BCCs and identified mixed histological patterns in 38.5% of cases. Their study demonstrated that nodular and superficial BCCs were more frequently completely removed by conventional excision, whereas micronodular, infiltrative, and morpheaform variants showed higher rates of positive surgical margins.⁶ These findings emphasize the importance of recognizing aggressive histological components during microscopic examination.

Similarly, Bartoš and Kullová examined 911 primary BCCs and reported mixed histomorphology in approximately one-third of cases. Aggressive growth patterns were more frequently observed among mixed-type tumours than among single-type tumours. Positive surgical margins were also more common in the mixed-type group, highlighting the potential clinical importance of histological heterogeneity.⁷

The most distinctive finding in the present case was the identification of nodular and morpheaform histopathological patterns in three separately submitted specimens obtained from the same left nasal region. Containers 1 and 2 demonstrated nodular BCC, characterized by relatively well-defined basaloid tumour nests with peripheral palisading and stromal clefting. In contrast, container 3 demonstrated morpheaform BCC, characterized by irregular infiltrating strands and cords of basaloid cells within dense sclerotic stroma.

Although both patterns were identified in specimens from the same anatomical region, their precise spatial relationship could not be established from the separately submitted tissues. Therefore, the findings should be interpreted as coexistence of distinct histopathological patterns within the same nasal region rather than definitive evidence of a single continuous mixed-pattern tumour. Nevertheless, the case demonstrates the importance of comprehensive tissue sampling and recognition of aggressive histological components.

The nasal region is an anatomically and cosmetically sensitive location for BCC. Tumours in this area may involve structures with limited surrounding tissue availability, creating challenges for complete excision and reconstruction. The presence of an infiltrative histological subtype is particularly important because microscopic tumour extensions may extend beyond clinically apparent boundaries. This creates a need for careful preoperative assessment and appropriate surgical margin evaluation.

Complete surgical excision remains a principal treatment modality for BCC. The American Academy of Dermatology guidelines emphasize the importance of risk stratification according to anatomical location, tumour characteristics, histological subtype, and recurrence status.⁸ The European consensus-based interdisciplinary guidelines similarly

recommend complete surgery as first-line treatment and micrographically controlled surgery for high-risk or recurrent BCCs and lesions involving critical anatomical sites.⁹

In the present case, wide local excision with flap reconstruction was performed, and histopathological examination demonstrated tumour-free surgical margins. This finding is favourable because no tumour was identified at the examined margins. Nevertheless, negative margins do not completely eliminate the possibility of subsequent recurrence, particularly when an aggressive histological subtype is present.

Long-term recurrence risk is influenced by several factors, including tumour location, previous treatment, and completeness of excision. Silverman et al. demonstrated that previously treated BCCs had higher recurrence rates than primary lesions, emphasizing the importance of distinguishing recurrent from newly diagnosed disease.¹⁰ The patient's history of a previous lesion excision approximately two years earlier is therefore clinically relevant, although the absence of the earlier histopathology report prevents determination of whether the current lesion represents recurrent or new primary disease.

In a separate analysis of surgically excised BCCs, Silverman et al. identified anatomical location on the head as an important factor associated with recurrence.¹¹ These observations support continued surveillance following treatment, particularly in patients with facial lesions and aggressive histological patterns.

The patient's advanced age also deserves consideration. At 92 years, treatment decisions must account for comorbidities, operative risk, functional preservation, and expected treatment benefit. In the present case, surgical excision with flap reconstruction was performed, and the documented immediate postoperative recovery was satisfactory.

The recognition of multiple histological patterns within the same anatomical region also emphasizes the importance of communication between surgeons and pathologists. Accurate specimen identification and documentation of anatomical orientation facilitate clinicopathological correlation and assist in determining the relationship between different tumour components. In cases involving infiltrative histological subtypes, detailed assessment of surgical margins is particularly important.

The principal significance of this case lies in the identification of distinct nodular and morpheaform BCC patterns in specimens obtained from the same left nasal region. Although mixed histological patterns are recognized in BCC, their identification in separately submitted specimens underscores the importance of comprehensive microscopic examination. The presence of a morpheaform pattern is particularly relevant because of its infiltrative architecture and implications for surgical clearance.

The main limitations of this case include the inability to establish the precise spatial relationship between the two histological patterns and the absence of long-term postoperative follow-up. The histopathological findings from

the previously excised lesion were also unavailable. Despite these limitations, the case illustrates the diagnostic importance of recognizing distinct growth patterns and correlating microscopic findings with clinical and operative information.

4. Conclusion

This case demonstrates the coexistence of nodular and morpheaform histopathological patterns of basal cell carcinoma in specimens obtained from the left nasal region of a 92-year-old male. Nodular BCC exhibited characteristic basaloid tumour nests with peripheral palisading and stromal clefting, whereas morpheaform BCC demonstrated infiltrative strands and cords of basaloid cells within dense sclerotic stroma. Wide local excision with flap reconstruction was performed, and the surgical margins were free of tumour. Recognition of distinct histopathological patterns, particularly the aggressive morpheaform subtype, is essential for accurate diagnosis, appropriate surgical management, and postoperative surveillance. This case emphasizes the importance of comprehensive histopathological examination and clinicopathological correlation in the management of BCC involving the nasal region.

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