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Case Report

A case report on malignant cylindroma over nape of neck

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ABSTRACT

Cylindromas are uncommon adnexal tumors that exhibit eccrine or apocrine differentiation and usually follow a benign, slow-growing course. They most often occur in the head and neck region and may present as isolated sporadic lesions or as multiple tumors associated with inherited syndromes. Malignant transformation is rare, particularly in solitary lesions. We report a rare case of malignant cylindroma arising over the nape of the neck in a 60-year-old woman with a long-standing swelling that recently developed ulceration and discharge. This case underscores the importance of careful assessment of long-standing adnexal tumors that demonstrate new or atypical clinical features, as these changes may indicate malignant transformation.

Keywords: Adnexal tumor, Cylindroma, Malignant cylindroma, Nape of neck

INTRODUCTION

Cylindromas are rare benign adnexal tumors derived from sweat gland structures and show a marked predilection for the head and neck region.[1]

They are more commonly seen in women and typically present as slow-growing nodules that remain asymptomatic for many years. Clinically, cylindromas may occur as solitary sporadic lesions or as multiple tumors in association with inherited conditions such as Brooke-Spiegler syndrome.[2]

Although cylindromas are usually benign, malignant transformation has been documented in rare.[3] This transformation is reported more frequently in patients with multiple lesions, while malignant change in solitary cylindromas is exceptionally uncommon. Malignant cylindromas are clinically significant because of their locally aggressive behavior and potential for regional and distant metastasis.

CASE REPORT

A 60-year-old woman presented with a swelling over the posterior aspect of the neck that had been present for approximately 20 years. During the preceding one month, the lesion developed ulceration with seropurulent discharge. There was no history of pain, bleeding, trauma, previous surgical intervention, or systemic illness.

On physical examination, a single, well-circumscribed, firm, fixed, multinodular mass measuring approximately 11×10 cm was noted over the nape of the neck. Focal ulceration measuring about 7×6 cm with reddish-brown crusting and discharge was present. No cervical, axillary, or other peripheral lymphadenopathy was detected.

Radiological findings

Magnetic resonance imaging (MRI) of the neck demonstrated a large, lobulated soft-tissue lesion located in the subcutaneous plane over the nape of the neck,

extending from the C3 to C6 vertebral levels. The lesion measured approximately 6.2×10.9×10 cm in anteroposterior, transverse, and craniocaudal dimensions. It appeared isointense to hypointense on T1-weighted images and hyperintense on T2-weighted images with a few cystic areas. Mild diffusion restriction with corresponding apparent diffusion coefficient reversal was noted. Scattered hypointense areas suggested a hemorrhagic component.

Histopathological evaluation

An initial wedge biopsy revealed sheets of round cells with scant cytoplasm, cleft-like spaces, and a prominent perivascular arrangement. Immunohistochemistry showed strong cytokeratin 7 positivity, weak epithelial membrane antigen positivity, strong CD99 positivity, and negativity for synaptophysin and S-100. Based on these findings, a provisional diagnosis of synovial sarcoma was suggested.

Following complete surgical excision, gross examination revealed a bosselated, skin-covered mass with multiple sinus tracts. The cut surface showed a well-circumscribed grey-white to grey-tan tumor with focal areas of hemorrhage, necrosis, and small cystic spaces.

Microscopic examination of the excised specimen demonstrated features consistent with cylindroma, along with increased cellularity, cellular pleomorphism, occasional mitotic figures, and focal absence of the peripheral hyaline material characteristic of benign cylindromas.

These findings were consistent with malignant transformation, and a final diagnosis of malignant cylindroma was established.

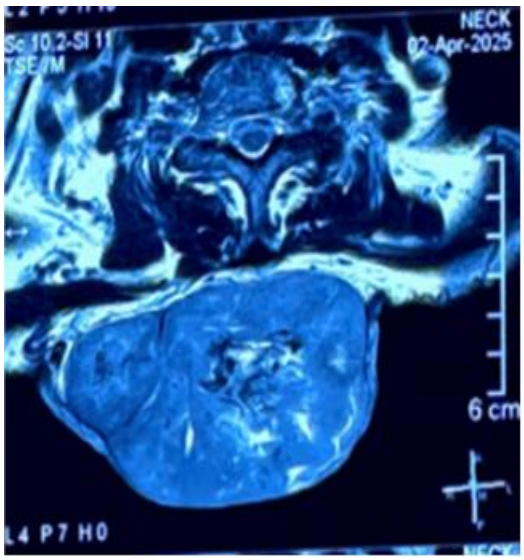

Figure 1: MRI neck showing a lobulated subcutaneous soft-tissue mass over the nape of the neck with cystic areas.

Figure 2: Gross specimen showing a bosselated, skin-covered mass with sinus openings.

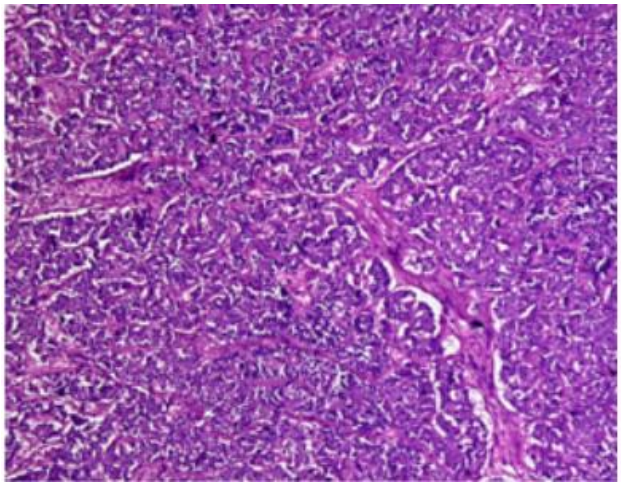

Figure 3: Histopathology showing increased cellularity and pleomorphism with loss of typical hyaline sheathing (H and E stain).

DISCUSSION

Cylindromas are rare adnexal tumors that usually present as benign, slow-growing nodules in the head and neck region. Two clinical forms are recognized: a sporadic solitary form and an inherited multifocal form associated with Brooke-Spiegler syndrome.[1,5] Malignant transformation is an uncommon event and has been reported more frequently in patients with multiple lesions than in those with solitary tumors.[1,5]

Malignancy should be suspected when a long-standing lesion demonstrates rapid growth, ulceration, bleeding, pain, or fixation to underlying structures. Histologically, malignant cylindromas lose the characteristic jigsaw-puzzle architecture and peripheral hyaline sheaths seen in benign lesions.[1,3] Instead, they exhibit increased cellularity, nuclear atypia, pleomorphism, mitotic activity, and infiltrative growth patterns. Diagnosis may be challenging, particularly on limited biopsy samples, as malignant cylindromas can mimic other aggressive soft-tissue tumors.[1,7] Immunohistochemistry may support adnexal differentiation but does not reliably distinguish

benign from malignant lesions.[10] Therefore, complete excision and comprehensive histopathological evaluation remain essential for accurate diagnosis.

Although rare, malignant cylindromas may behave aggressively, with local tissue destruction and reported regional and distant metastases involving lymph nodes, lungs, liver, bone, thyroid, and gastrointestinal tract. Owing to this malignant potential, wide local excision is considered the treatment of choice for solitary lesions, while patients require diligent long-term follow-up to detect recurrence or metastasis at an early stage.

CONCLUSION

Malignant transformation of a solitary cylindroma is an exceptionally rare occurrence. Long-standing adnexal tumors that develop rapid growth, ulceration, or other atypical features should prompt suspicion for malignancy. Complete surgical excision with thorough histopathological assessment is essential for definitive diagnosis and appropriate management. This case adds to the limited literature on malignant cylindromas arising from solitary lesions and highlights the importance of early recognition and timely intervention to optimize patient outcomes.

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