An Aggressive Microcystic Adnexal Carcinoma Infiltrating the Sternum

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ABSTRACT

Microcystic adnexal carcinoma is a rare cutaneous tumor that is often misdiagnosed and has the potential to be aggressive. Mohs surgery is the treatment of choice to prevent recurrences. We present a case of a large recurrent microcystic adnexal carcinoma on the sternum, initially diagnosed as a basal cell carcinoma. This tumor infiltrated the muscle and bone and was unresectable with Mohs surgery.

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CASE REPORT

A 59-year-old male presented with a non-healing lesion on the sternum (Figure 1) where a basal cell carcinoma (BCC) had been excised 7 years prior. The surgical scar had enlarged over the past 6 months, with a recent history of bleeding. Examination showed a 6.5 x 4.5 cm, firm, brown, and pink plaque with central erosion fixed to underlying tissues. A shave biopsy was performed showing a poorly circumscribed neoplasm comprised of nests of basaloid cells with mitotic figures exhibiting peripheral palisading and clefting (Figure 2). A diagnosis of recurrent sclerosing BCC was made.

The patient was referred for Mohs surgery (MS). The first stage of MS showed evident tumor extending to muscle and bone. Frozen section pathology showed extensive persistent tumor at the peripheral and deep margins composed of numerous cords and small nests of basaloid cells, some with ductal differentiation in a desmoplastic stroma (Figure 3a, 3b). A revised tumor diagnosis of microcystic adnexal carcinoma (MAC) was made. A second stage removed additional involved deep soft tissue and cleared the peripheral surgical margins with a final defect measuring 12 x 12 cm. Persistent deep tumor involved bone, muscle, and tracheal lining (Figure 4). The patient was referred to plastic surgery where anterior chest wall resection was required to clear the tumor.

DISCUSSION

MAC is a rare cutaneous tumor that occurs most commonly in middle aged adults on the head and neck, with a predilection for the central face. These tumors are often misdiagnosed, especially after superficial biopsies. A study of 44 cases found 32.5% were misdiagnosed on biopsy, most commonly as BCC (25%),[1] and are also commonly misdiagnosed as desmoplastic trichoepitheliomas or trichoadenomas. Data from a 2010 National Cancer Institute database showed 74% of the 223 cases of MAC where located on the head and neck, with only 7% on the trunk. Local invasion of fat, muscle, or bone was present in 9% of the cases. Additionally, 1 case showed metastatic disease and 3 cases (1%) had lymph node involvement.[2] The treatment of choice is MS, which has the lowest recurrence rates.[3] Recurrence rates of MAC treated with MS vary from 5% up to 10.3%.[1;4] Wide local excision is also effective, however positive margins and recurrence rates are higher.[3]

This case is unusual in that it was a large, deeply invasive, recurrent MAC of the chest involving muscle and bone, and was unresectable with MS. Recurrent MAC, perineural involvement, and periocular lesions have been reported to be associated with residual tumor after MS.[1;4] This case demonstrates the need to clear the peripheral soft tissue margins and carefully photo-document the location of residual cancer when a case unresectable with MS is referred for continued extirpative care.

DISCLOSURES

Drs. Sandoval and Steinman have no conflicts to disclose.

FIGURE 1. Large non-healing lesion on sternum at site of previously excised basal cell carcinoma.

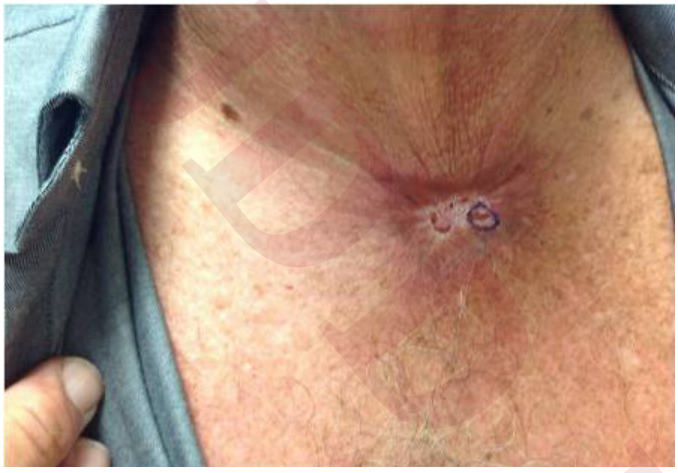


FIGURE 2. Pathology showing a poorly circumscribed neoplasm comprised of basaloid cells in nest exhibiting peripheral palisading and clefting, with mitoses seen, consistent with a basal cell carcinoma.

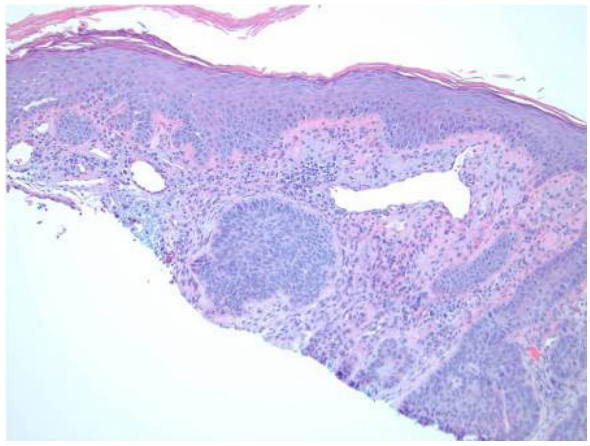


FIGURE 3. First stage Mohs slide showing extensive persistent tumor at the deep margins composed of numerous cords and small nests of basaloid cells, some with ductal differentiation in a desmoplastic stroma (A) and invasion of muscle (B).

(A) **(B)**

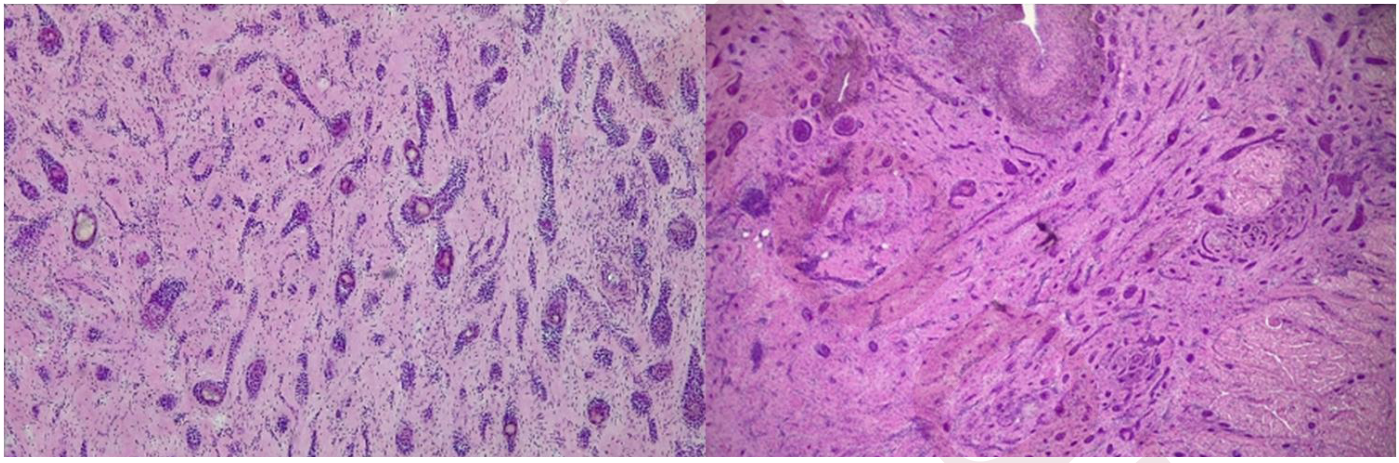
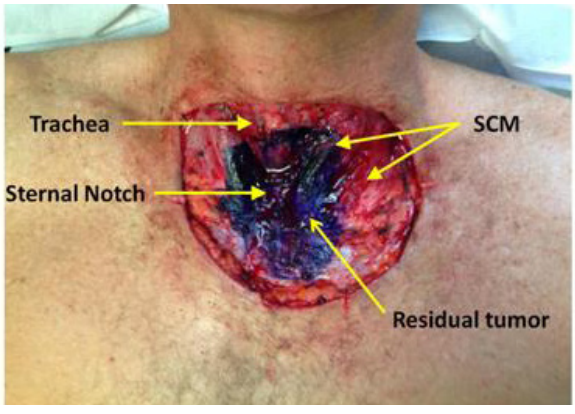


FIGURE 4. Final Mohs defect, with residual deep tumor remaining (inked), invasion to the bone, muscle (sternocleidomastoid muscle (SCM)), and tracheal lining.



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