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Cutaneous Metastasis from Submandibular Gland Carcinoma: A Rare Case Report

[1]Sujata.S.Kumbhar, Department of Pathology, Krishna Institute of Medical Sciences University, Karad
[2]Avinash Mane, Department of Pathology, Krishna Institute of Medical Sciences University, Karad
[3]Shefali Mishra, Department of Pathology, Krishna Institute of Medical Sciences University, Karad
Corresponding Author: Avinash Mane, Department of Pathology, Krishna Institute of Medical Sciences University, Karad

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Abstract
Submandibular gland carcinomas are uncommon, that metastasise to other organs but cutaneous metastasis is extremely rare. We present a case of submandibular gland carcinoma that presented with cutaneous metastasis two years post-surgery and chemoradiation.

Keywords: Carcinoma, Cutaneous metastasis, Submandibular gland

Introduction

Salivary gland tumors are reported to represent 1% - 5% of all head-and-neck tumors. Of these, 75%–85% found in the major and 10% to 20% in the minor salivary glands with a ratio of 5:1. Various series from around the world report annual incidence for all salivary glands tumors to be between 0.4 and 13.5 cases/100,000.[1] 80% of major salivary gland tumours occur in the parotid glands,[2]. As a general rule in clinical practice, the smaller the salivary gland is, the more likely the tumour is malignant. In the parotid glands, 20–25% of the tumours are malignant. This rises to 40% for the submandibular glands, and more than 90% of sublingual gland tumours are malignant [3, 4].Highly aggressive neoplasms has high rate of mortality and distant metastasis but cutaneous metastasis from malignancy is uncommon. There are only 6 cases reported in literature with cutaneous metastasis and in all cases tumors originated from parotid gland [5,6,7,8,9]. To the best of our knowledge this is the second reported case of submandibular gland carcinoma with cutaneous metastasis[10].Skin metastases of an internal or visceral organ are rare [11] and in women the neoplasms that most commonly have skin metastases are breast cancer, neoplasms of the large intestine, and ovarian cancer. In men tumours from the lung, large intestine, and kidney have the highest rate of skin metastases [12]. Skin metastasis can mimic various benign and malignant lesions of the skin. We present a case of submandibular gland carcinoma that presented with cutaneous metastasis two years post-surgery and chemoradiation.

Case Report

A 56 years old lady presented to the surgery OPD with complaints of wound over right thigh since 2 months

which started as a small boil gradually increased in size and developed into a non healing wound.

Two years back, the lady presented with complaints of swelling over right neck of 9 months duration. The swelling was gradually increasing in size and not associated with pain. On local examination, Mouth opening was 3.5 cm. buccal mucosa, tongue, floor of mouth and palate appeared normal. Swelling was noted in right level IB of size 4 x3 cm which was hard and mobile, extending from lower border of mandible up to level of hyoid.

USG neck suggested heterogenously solid predominantly hypoechoic lesion in right submandibular region with non visualisation of right submandibular gland, suggestive of neoplastic etiology. Few subcentimetric to enlarged lymph nodes were noted at bilateral level IB and II level.

FNAC suggested low grade salivary gland neoplasm. CECT NECK suggested heterogeneously enhancing lesion of size 3,2 x 3.6 x 3.4 cm replacing right submandibular gland with speck of calcification abutting mylohyoid. Few subcentimetric level Ib nodes were present.

Patient under went right sided neck dissection for low grade salivary gland tumor and received chemoradiation for the same

Now, she presented with right thigh wound of 2 months duration. On examination3 x 4cm, round to oval ulcer which was indurated and had everted margins was noted. Base of the ulcer was covered with slough. The ulcer was non tender and did not bleed on touch. No inguinal lymphadenopathy was noted. Biopsy was sent to us for Histopathological evaluation.

Gross Examination: We received, multiple, irregular, grey white to grey brown, soft to firm tissue bits. Largest tissue bit measured 0.4 x 0.3 x 0.2cm. Specimen was submitted entirely.

On microscopic evaluation we diagnosed it as Moderate to poorly differentiated mucins secreting adenocarcinoma deposits seen invading epidermis and dermis with extensive necrosis and inflammatory cell infiltration with a note as-In view of history of operated case of submandibular gland adenocarcinoma, possibility of cutaneous metastasis to right thigh from this adenocarcinoma can be considered. Immunohistochemistry was adviced but the report could not be traced.

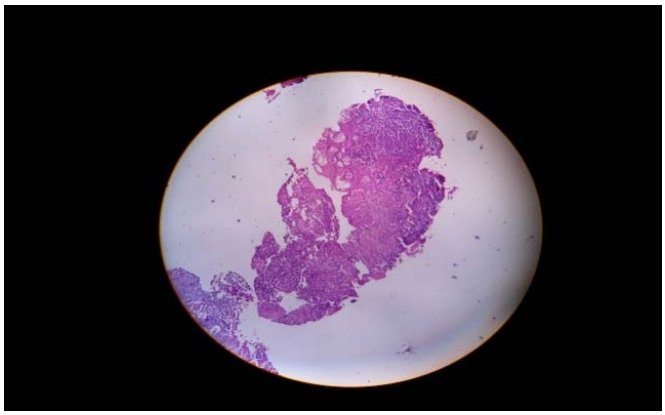

Fig 1: Scanner View

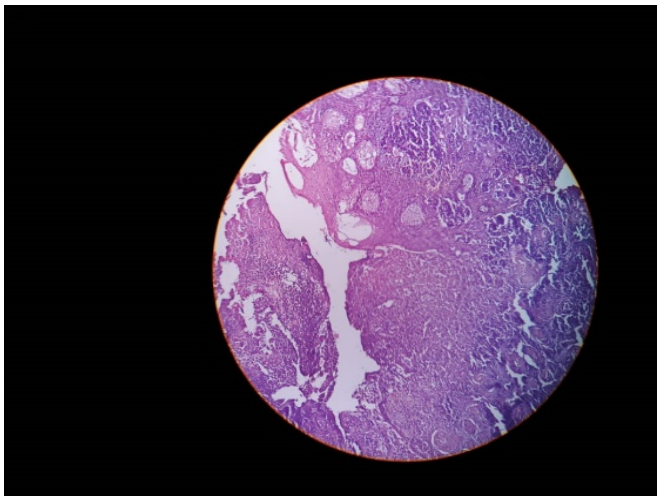

Fig 2: Low power view showing skin epidermis and dermis infiltrated by neoplastic cells arranged in glandular fashion and sheets with areas of mucin

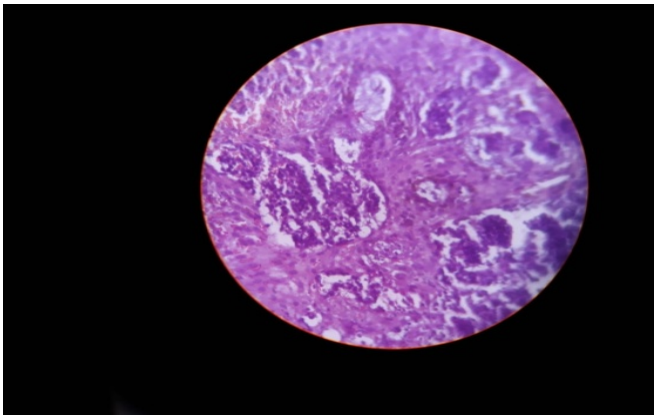

Fig 3

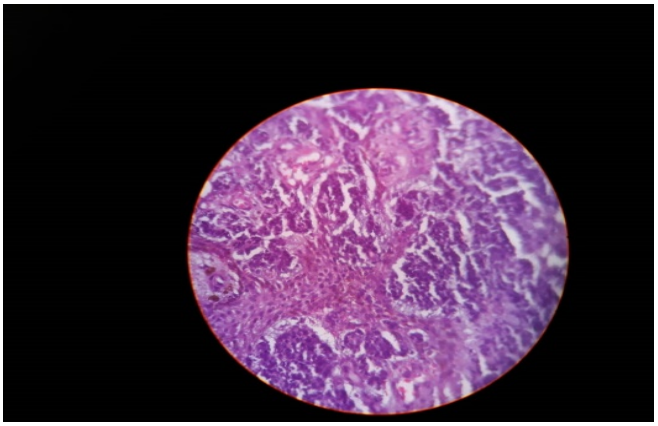

Fig 4: Fig 3 & 4 High power view showing skin epithelium infiltration by neoplastic cells arranged in sheets and glands. Individual cells are round to cuboidal with moderate to severely pleomorphic hyperchromatic nuclei and scanty cytoplasm. Mucinous areas are also seen.

Fig 5: Showing mucinoid areas

Discussion

Cutaneous metastasis from salivary gland tumors is extremely rare. Only 6 cases have been reported in literature till date [5, 6, 7, 8, 9]. Skin metastasis from visceral malignancies can present as subcutaneous nodules, erythematous patch and plaques to firm papules and nodules and can mimic numerous benign and malignant skin lesions like epidermoid cyst, basal cell carcinoma and keratoacanthoma. Moreover they may mimic bacterial infections and present as ulcers. In our case it presented as a small boil which gradually increased in size and developed into a non healingulcer. Visceral neoplasms can metastasise to skin either directly or through hematogenous or lymphatic spread. Cutaneous metastasis are underdiagnosed and often underestimated.When a patient with previous history of some organ malignancy present with a skin lesion, possibility of cutaneous metastasis should be considered. In our case the lady presented with a swelling over right neck and was diagnosed as Adenocarcinoma of right submandibular gland and was operated and received chemoradiation for the same. Two years later she presented with a ulcer over right thigh, biopsy from which was sent to us for histopathological evaluation where we reported it asModerate to poorly differentiated mucin secreting adenocarcinoma deposits seen invading epidermis and dermis with extensive necrosis and inflammatory cell infiltration-Cutaneous metastasis from submandibular gland carcinoma.

Conclusion

Cutaneous metastasis from primary salivary gland neoplasms is a rare occurrence. Any skin swelling if clinically suspicious excision biopsy should be considered as first line diagnostic modality. Thus to

conclude we are presenting this case not only for its rarity but to put emphasis on excision biopsy as first line diagnostic modality.

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