Cutaneous metastasis from salivary duct carcinoma: A rare case and review of literature

Dear Editor,

Salivary duct carcinoma is a rare, highly aggressive malignancy arising most commonly from the excretory duct of the parotid salivary gland and carries a poor prognosis. It is associated with a high rate of distant metastasis, but cutaneous metastasis is extremely rare. Salivary duct carcinoma and breast ductal carcinoma have a similar histopathological and immunophenotypical profile with positivity for androgen receptor, carcinoembryonic antigen and rarely human epidermal growth factor receptor 2 overexpression. Histologically, salivary duct carcinoma shows intraductal invasion, cribriform cell nest formation and comedonecrosis.[1] This case highlights the rare cutaneous metastasis from a salivary duct carcinoma occurring in a middle-aged man.

A 56-year-old man initially presented to the otorhinolaryngology department approximately 14 months ago with the complaint of an asymptomatic, progressively enlarging swelling on the left parotid gland, which had been evident for the preceding 2 months. Subsequent histopathological examination yielded a diagnosis of salivary duct carcinoma, specifically the adenocarcinoma subtype, along with evidence of extra nodal extension. Immunohistochemical analysis revealed positive markers for cytokeratin 7 (CK7) and Her2/neu. As part of the management, he underwent a total conservative left parotidectomy along with a modified radical neck dissection. Following the surgical intervention, 2 months later, he was started on radical radiotherapy. This radiotherapy regimen employed the simultaneous integrated boost-volumetric modulated arc therapy (SIB-VMAT) technique with a cumulative dose of 66 Gy administered over 33 fractions spanning 6.5 weeks, along with an additional 50 Gy administered over 25 fractions during a 5-week period. Upon the conclusion of his radiotherapy treatment, the patient exhibited the emergence of cutaneous manifestations within the irradiated field, prompting a referral to the dermatology department for further evaluation. Dermatological assessment revealed a well to ill-defined erythematous to purpuric plaque measuring 20 × 10 cm situated on the anterior and lateral aspects of the neck and upper chest with the left side more prominently affected than the right. Notably, the plaque displayed areas of superficial yellowish-white scale-crust and multiple whitish-yellow papules distributed across its surface. Importantly, the central portion of the plaque exhibited greater firmness compared to its periphery [Figure 1]. On dermoscopy, diffuse erythema in the background with yellowish globules and areas of blood vessels/telangiectasias in the periphery were noted [Figure 2]. Skin biopsies from two different sites on the plaque showed small and large nests of atypical tumour cells infiltrating the superficial and deep dermis. Large dermal lympho-vascular tumour emboli were seen [Figures 3a to 3c]. Immunohistochemistry (IHC) as similar to the primary tumour with diffuse cytoplasmic positivity for (CK7) and strong (3+) membranous positivity for Her2/neu [Figures 4a to 4d]. CK7 positivity has been found to be significantly higher in metastatic salivary gland carcinomas as compared to squamous cell carcinoma. Up to 80% of the patients with salivary duct carcinoma have been found to be positive for Her2/neu, which suggests the aggressive nature of the condition. Histopathological mimickers like dermal duct tumour were ruled out owing to the absence of ducts, poroid clear cells, and the presence of significant atypia. Metastasis from other sources was ruled out owing to a similar histopathology and IHC to the primary tumour. Thus, a diagnosis of cutaneous metastasis from salivary duct carcinoma was made. He was counselled regarding the poor prognosis and referred to medical oncology for palliative management.

Figure 1: Erythematous to purpuric plaque over the anterior and lateral aspects of neck and upper chest with areas of superficial, yellowish-white scale-crust and multiple whitish-yellow papules.

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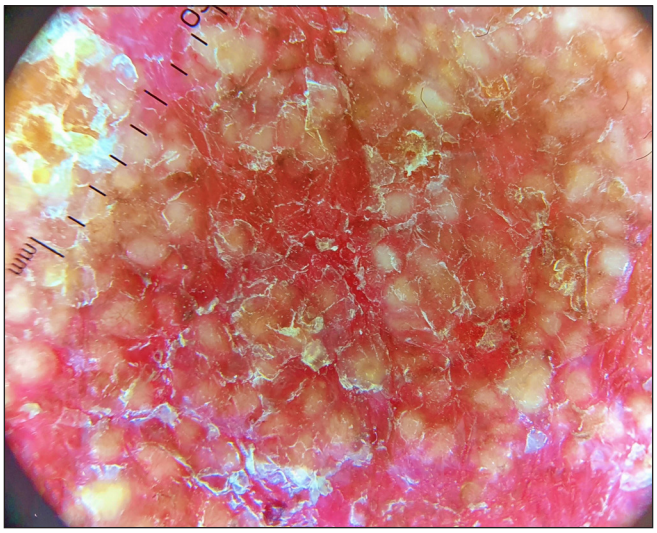

Figure 2a: Polarised dermoscopy showing diffuse erythema in the background with yellowish globules (10x).

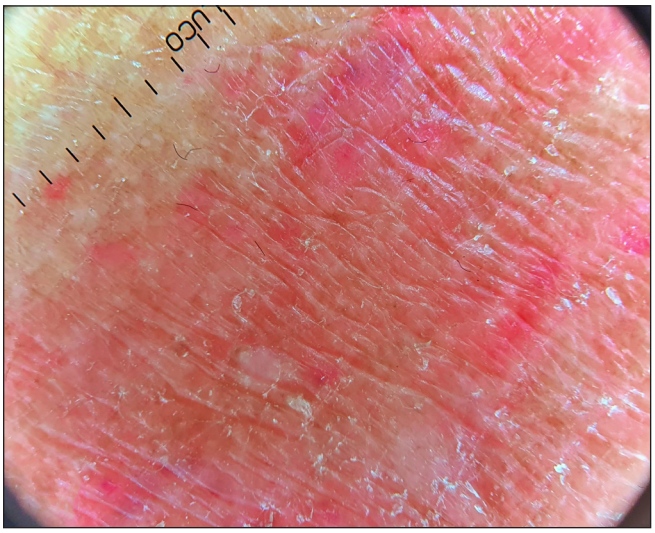

Figure 2b: Dermoscopy showing areas of blood vessels/telangiectasias in the periphery.

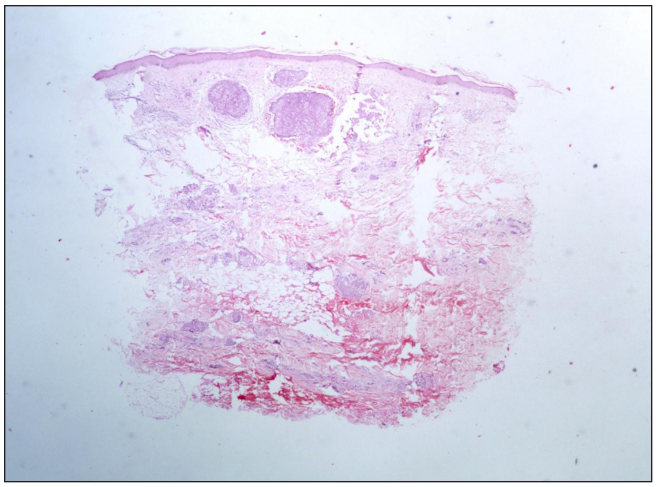

Figure 3a: Photomicrographs from biopsies of the chest plaque showing infiltration of superficial and deep dermis by nests of atypical cells along with lympho-vascular emboli (Haematoxylin & eosin, 20x).

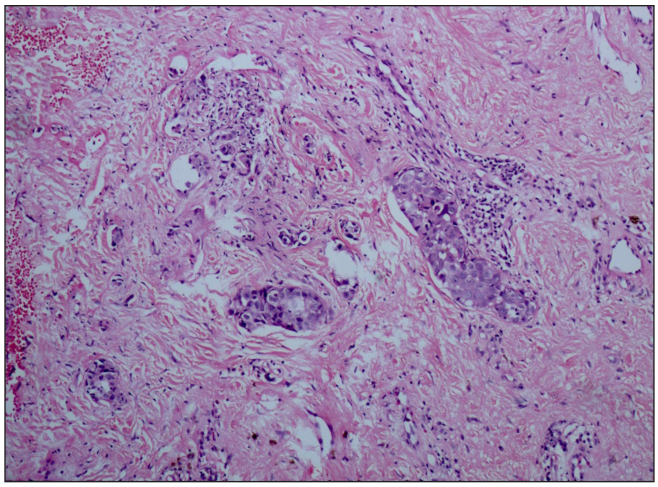

Figure 3b: Photomicrographs from biopsies of the chest plaque showing nests of atypical cells infiltrating between collagen bundles (Haematoxylin & eosin, 100x).

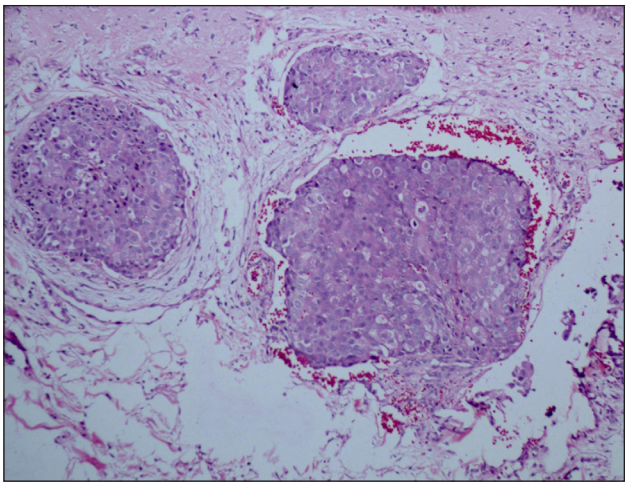

Figure 3c: Photomicrographs from biopsies of the chest plaque showing dermal lympho-vascular channels with tumour emboli (Haematoxylin & eosin, 200x).

Cutaneous metastasis accounts for approximately 10% of distant metastatic occurrences originating from internal malignancies such as breast, large intestine, ovary, lungs and kidney.[2] These skin metastases can manifest in a diverse array of clinical appearances, including firm papules or nodules, subcutaneous nodules, erythematous plaques, ulcers, hair loss (referred to as alopecia neoplastica), and in some cases, they may mimic various dermatological conditions such as granuloma annulare, pyogenic granuloma, acute paronychia, varicella-zoster, scleroderma, epidermoid cysts, keratoacanthoma and more.

Salivary duct carcinoma is a rare and highly aggressive malignancy, most frequently originating from the parotid gland, followed by the submandibular gland and other minor salivary glands. Salivary duct carcinoma carries a substantial risk of metastasizing to various organs, albeit skin metastasis being an exceptionally rare occurrence. To date,

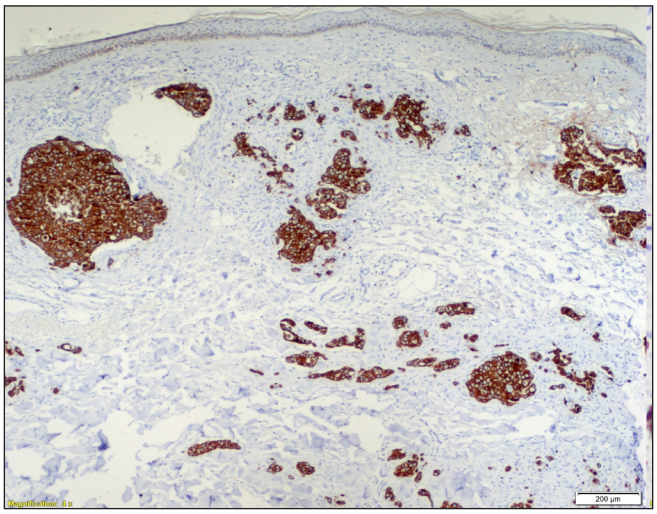

Figure 4a: Photomicrographs from biopsies of the chest plaque showing diffuse cytoplasmic positivity with CK-7 (40x).

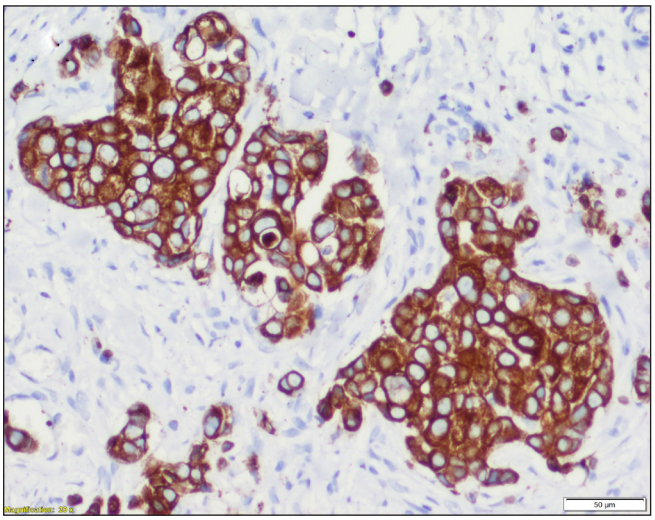

Figure 4b: Photomicrographs from biopsies of the chest plaque showing diffuse cytoplasmic positivity with CK-7 (200x).

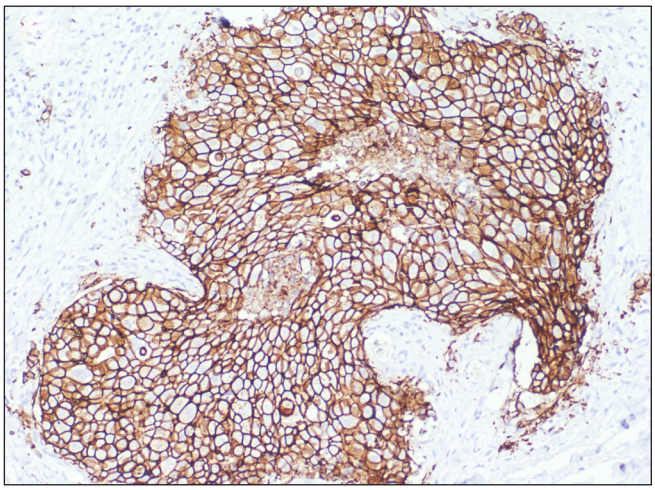

Figure 4c: Photomicrographs from biopsies of the chest plaque showing strong (3+) membranous positivity with Her2/neu (100x).

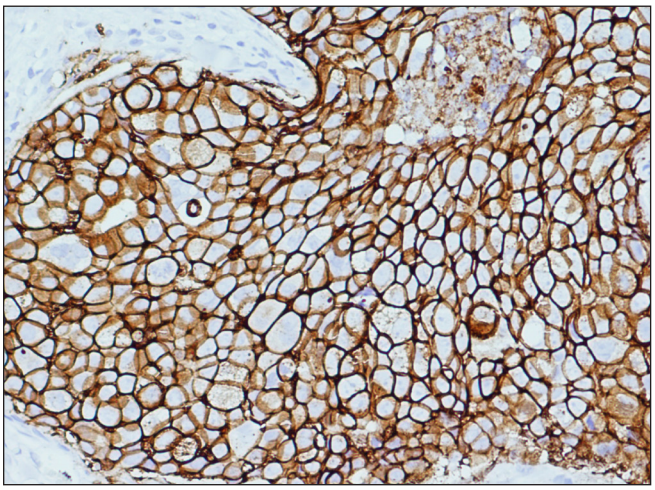

Figure 4d: Photomicrographs from biopsies of the chest plaque showing strong (3+) membranous positivity with Her2/neu (200x).

only ten documented cases of cutaneous metastasis from salivary duct carcinoma exist in the medical literature. The clinical presentations resembled radiation recall dermatitis,[3] basal cell carcinoma,[4] telangiectatic lesions[5] or carcinoma haemorrhagiectoides with some cases displaying a distinctive 'shield sign' in which the skin metastasis resembled the shield of a medieval knight on the chest.[6]

In our case, the initial working diagnoses included cutaneous metastasis (often referred to as carcinoma en cuirasse) and chronic radiation dermatitis. However, histopathological examination confirmed the diagnosis of cutaneous metastasis of the adenocarcinoma subtype from the salivary duct carcinoma. Latter is indicative of an unfavourable prognosis with a 5-year survival rate of approximately 43%.[7]

It is essential to underscore the significance of recognising cutaneous metastasis as the primary or concurrent presentation of an underlying systemic malignancy, as early detection and intervention are crucial.

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Eruptive lichen planus treated with baricitinib: A case report

Dear Editor,

Lichen planus (LP) is a chronic inflammatory skin disease characterised by violaceous, polygonal, pruritic, flat-topped papules or plaques with white lines on the surface known as Wickham striae. Systemic therapies are necessary for the management of generalised LP. Conventional medications include retinoids, corticosteroids, phototherapy and immunosuppressants such as methotrexate and cyclosporine.[1] However, there are some cases which tend to be refractory to standard treatments.[2] Therefore, a more effective and safer therapeutic approach is needed. In this report, we present a case of phototherapy-resistant eruptive LP, which showed remarkable response to treatment with baricitinib, a Janus kinase 1 and 2 (JAK1/2) inhibitor, which was well tolerated.

A 49-year-old woman reported skin rashes with pruritus on her shoulder and back for 3 months. Physical examination revealed multiple erythematous to brownish polygonal papules, 3~5 mm in diameter, which were symmetrically distributed on her trunk, upper extremities and dorsum of both hands [Figures 1a and 1b]. Asymptomatic reticular white patches were observed on her bilateral buccal mucosae. Histological analysis was notable for wedge-shaped thickening of the granular layer, liquefactive degeneration and band-like subepidermal lymphocytic infiltration. Colloid bodies were also seen [Figure 1c]. The patient was otherwise healthy and tested negative for hepatitis B and C antibodies. A diagnosis of eruptive LP was made. We used the Visual Analogue Scale (VAS) score to evaluate pruritus and the Lichen Planus Activity and Damage Index (LiPADI) to assess disease severity.[3] At baseline, her VAS score was 4, with LiPADI scoring of 26.

Three months of narrowband ultraviolet B (NB-UVB) therapy three times per week in combination with topical corticosteroids (Halometasone cream, 0.05%) and calcineurin inhibitor (Tacrolimus cream, 0.1%) provided only minimal relief to the patient's symptoms, and the skin lesions continued to progress. As a result, the patient was considered resistant to phototherapy.[4] Due to concerns about potential side effects, the patient declined oral steroids, immunosuppressants and acitretin. The patient was then treated with 4 mg baricitinib per day, which led to complete resolution of itching after 2 weeks. Over time, the patient's VAS and LiPADI scores decreased significantly [Table 1]. Flattened papules and post-inflammatory hyperpigmentation were observed with no occurrence of new skin lesions [Figure 2]. After 20 weeks of continuous treatment with baricitinib, the patient experienced complete resolution of pruritus, further flattening of the papules and eventually hyperpigmentation. At the 30-week follow-up, there was no recurrence of skin lesions and no report of side effects.

Lichen planus is an inflammatory disease that can affect the skin, nails and mucosae. Histologically, it is characterised by the presence of band-like infiltrates of lymphocytes primarily at the junction of dermis and epidermis, known as lichenoid infiltrate.[5] While the immunopathogenesis of LP is not completely understood, there is increasing evidence suggesting that Janus kinase signal transducer and activator of transcription (JAK-STAT)-dependent cytokines, such

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