

Acute Marjolin's Ulcer: A Forgotten Entity

Dear Editor,

Marjolin's ulcers are malignancies that arise from areas of chronic irritation or injury that undergo malignant transformation after a period of many years.¹⁻³ Such lesions are predominantly squamous cell carcinomas (SCC) and have long been associated with burn scars.⁴ Here we describe an unusual case of Marjolin's ulcer that developed only 3 months following a complication arising from a tooth extraction. The aetiology of an acute Marjolin's ulcer is discussed.

Case Report

The patient is a 65-year-old Malay lady with comorbidities of hypertension and Type II diabetes. Her problems began after a right lower premolar extraction due to caries, complicated by recurrent abscess formation. Three months after the tooth extraction, she presented with a 1.5 cm x 0.6 cm chronic discharging sinus with raised edges on the right chin superficial to the location of the previous abscess. There was no notable intraoral lesion. Histology revealed a poorly differentiated SCC in background inflammatory changes. Positron emission tomography (PET)/computed tomography (CT) revealed a 28 mm x 10 mm hypermetabolic, expansile lucency on the right mandible associated with breach of the anterior cortex (Fig. 1). No evidence of distant metastasis was seen.

The patient underwent a right segmental mandibulectomy with en-bloc excision of the sinus and a right supraomohyoid neck dissection. Histopathology report confirmed the presence of a 7-mm invasive moderately differentiated SCC centred on the cutaneous ulcer, which had eroded into the external mandibular periosteum. In contrast, intraoral mucosa and periosteum were tumour free. This precluded the possibility of a previously undiagnosed alveolar SCC. The patient was uneventfully discharged on postoperative day 8.

Discussion

The pathogenesis of Marjolin's ulcer has only been theorised. Chronic irritation has been widely recognised as a carcinogenic factor as postulated by Virchow.⁴ Immunologic aetiology, lymphatic obliteration and toxins from damaged tissues have also been postulated to play a role in the carcinogenesis of Marjolin's ulcer.

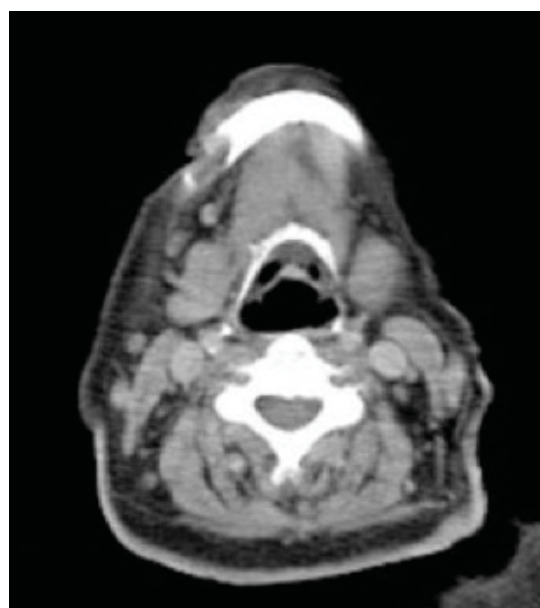


Fig. 1. Axial CT image showing a lytic lesion eroding through the cortex of the mandible.

This case reflects the classical chronic inflammation pathway for carcinogenesis. What is unusual would be the rapid latent period of only 3 months before detection of the SCC. Treves et al³ was the first to classify Marjolin's ulcers into scars that underwent neoplastic transformation less than a year and those after 1 year. He described a series of 28 burn scars of which 6 turned out to be acute with an average latency of 4 months. However, acute cases not associated with burns are scarce and it remains unclear why some wounds are predisposed for early malignant change.

Prognosis

Marjolin's ulcers tend to be more aggressive compared to other forms of skin cancers and have a higher regional metastasis and fatality rate. Metastasis rate of 27.5%⁵ has been reported while 5-year survival rates vary from 11.1% to 63.6% depending on location, tumour size, lymph node involvement and histological grading.⁶ Whether such data could be applied to cases of acute Marjolin's ulcer remains unknown.

Clinical Presentation and Investigations

Marjolin's ulcers can be a diagnostic challenge. High clinical suspicion and a low threshold for biopsy is required for sudden unexplained ulcerations which are painful, non-healing and have characteristics such as everted edges, easy infectability or foul smell. The relatively asymptomatic and harmless appearance delays seeking medical attention and could prove costly in terms of morbidity associated with late surgical treatment. An undiagnosed alveolar SCC can present similarly. This is unlikely to be the case as histology and imaging showed non-involvement of the mucosal epithelium and muscosal aspect of the mandibular periosteum. Instead the SCC appeared to have arisen de novo from the cutaneous chronic ulcer.

Management

Advanced stage Marjolin's ulcer due to late detection is unfortunate as early treatment with a wide local excision and skin grafting can be curative. In the case presented, invasion of the mandibular cortex warranted a larger resection in the form of a segmental mandibulectomy. It was also important to exclude metastasis to the mandible.

Conclusion

Marjolin's ulcers are largely associated with chronic non-healing burn scars, however one should be aware of the possibility of an acute progression. High index of clinical suspicion as well as low threshold for biopsy should be practised. Wide local excision remains the gold standard for treatment. We present a case that defies the classical presentation in terms of both latency and location, further highlighting the necessity for clinical vigilance against this manageable disease.

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