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Marjolin's ulcer presenting in the neck

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Abstract
'Marjolin's ulcer' is a term that has come to be used for epidermal squamous cell carcinomas that have developed in areas of chronic inflammation. To our knowledge this is the first ever report of a Marjolin's ulcer developing following long-term irritation of the skin of the neck. The history of the eponym is traced and reveals that Marjolin probably never actually described this pathological process.

Key words: Carcinoma, Squamous Cell; Inflammation; Skin; Neck

Case report

A 69-year-old woman presented acutely with bleeding from an enlarging chronic lesion on the right side of her neck. Further questioning revealed that she had been aware of a small (~10 mm × 10 mm) lesion for over 15 years. She could not remember any definite initiating event but wondered whether she had scratched herself. The patient found the lesion chronically irritating as it always rubbed on her collar. The lesion never full healed at any time because she picked off the scab repeatedly. The lesion remained small until approximately one year before her presentation to hospital. During this latter period the lesion had grown steadily and gained a raised rolled edge. It had bled in a minor fashion on a daily basis, but never so profusely as on this occasion. She had never sought medical help for the lesion until now.

Examination revealed an exophytic lesion measuring 60 mm × 80 mm low on the neck on the right-hand side with a central necrotic crater surrounded by a raised rolled irregular edge. No cervical lymphadenopathy was found.

The bleeding stopped with conservative measures. Haematological tests revealed a microcytic anaemia. (Hb : 5.3 g/dl, mean cell volume (MCV): 86 fl.). She was admitted for a blood transfusion to correct this. A biopsy of the edge of the lesion under local anaesthetic showed that all layers of the skin were widely infiltrated with a squamous cell carcinoma with basaloid features.

The whole lesion was excised with a margin of healthy skin and the defect was covered by a local rotation skin flap. No deep extension was noted at the time of operation.

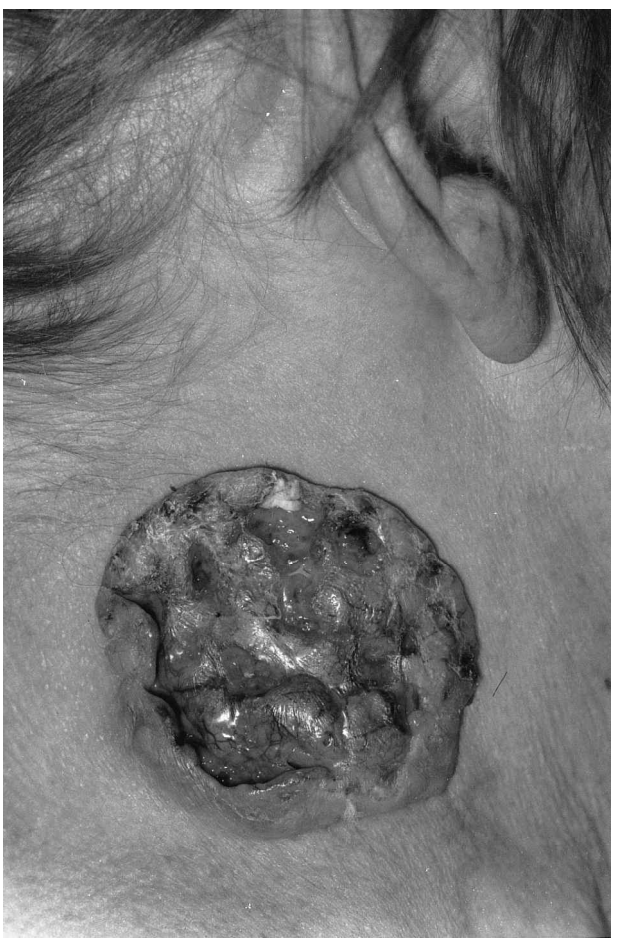

Fig. 1
Exophytic lesion on right side of neck.

Discussion

Squamous cell carcinomas are the most common skin tumour found in older individuals. Except for lower limb regions they are seen more commonly in males. Sunlight, and specifically ultraviolet irradication, is the most commonly accepted cause. Ionizing radiation and industrial exposure to certain tars and oils have also been implicated as risk factors.[1] The 10 different histological types seen to occur have recently been comprehensively reviewed by Bernstein et al.[2]

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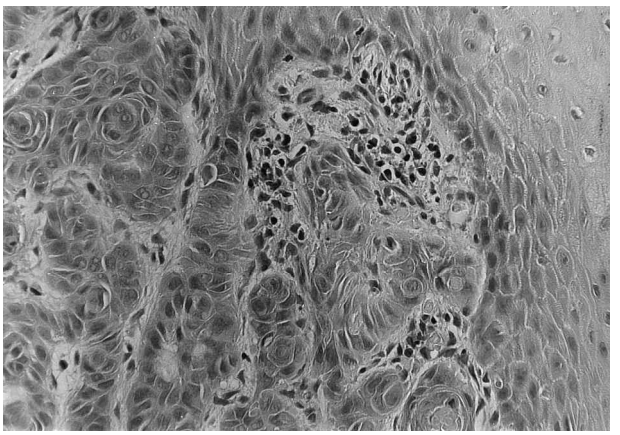

FIG. 2
Nests of malignant squamous cells invading stroma (H&E; ×100).

Jean-Nicholas Marjolin (died 1850) was a French surgeon working in the Hôpital de Sainte-Eugénie in Paris. He classified ulcers into those caused by 'internal' causes and those due to 'local' causes in an article entitled *Ulcère*, that was published in the *Dictionnaire de Médecine* in 1828.[3] He classified the locally caused ulcers into several types including *Ulcères cancroïdes*. It is unclear what exactly he meant by this term, but in a modern translation of the original work a distinction is made between these *Ulcères canchroides* and frankly malignant ulcers.[4] At no stage did Marjolin state that long-standing areas of ulceration could then undergo malignant change. 'Marjolin's ulcer' was first used as a term synonymous with malignant change in chronically inflamed skin by Da Costa in 1903.[5] The eponym was again used by Fordyce in his article about malignant disease in scars in 1911.[6] Since that time the eponym has become an accepted term in general usage despite that fact that it is unlikely that Marjolin ever described this pathology himself. In fact, the first malignant change in chronically inflamed skin was probably noted by Dupytren in 1839 in a case report of ulceration developing many years after a burn injury.[7] Smith, the Professor of Surgery at the University of Dublin, published a series of burn scar neoplasms in 1850 and erroneously compared them with the findings of Marjolin.[8]

'Marjolin's ulcer' has now become a term that is used more generally to describe any squamous cell carcinoma arising in an area of chronically inflamed skin. Malignant transformation of persistently irritated skin has been reported in many sites. Several reports exist of tumours developing in areas of old burn scar tissue.[9–12] Similarly, inflamed areas of skin surrounding sinuses from chronically discharging wounds can undergo malignant change, with this being seen in cases of discharging osteomyelitis[13] and pilonidal abscess.[14] Operation scars that have been repeatedly excoriated by the patient may also develop into squamous cell tumours after a protracted period.[15,16] Chronic inflammatory skin conditions such as acne conglobata and discoid lupus erythematosus may also undergo malignant change in time.[17]

It has been suggested that the increased cellular turnover in areas of chronic inflammation leads to an increased risk of a mitotic error occurring during cell division. The relatively avascular scar tissue may then act as a relatively immunologically privileged site that allows the tumour to resist the body's usual defences against 'foreign' cells.[18,19] Immunocompromised patients seem to be at an increased risk of developing such tumours.[20] The potential for metastasis, however, seems greater in Marjolin's ulcers than in other squamous cell carcinomas.[21]

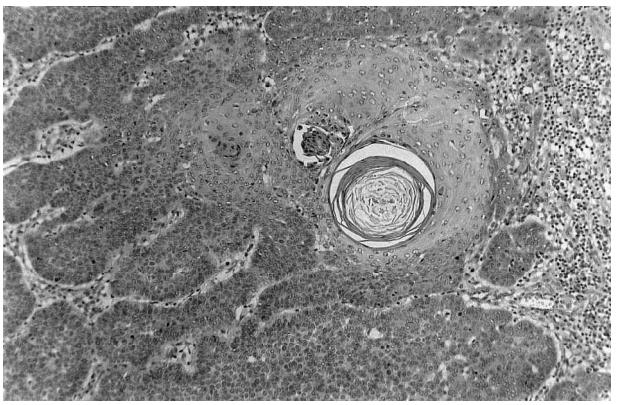

FIG. 3
A keratin pearl, typical of squamous cell carcinoma (H&E ;×100).

We believe that we have reported the first case of a Marjolin's ulcer of the neck skin, developing in an area of chronic inflammation following minor trauma that has never been allowed to heal fully.

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