Squamous cell carcinoma complicating prurigo nodularis

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ABSTRACT

Squamous cell carcinoma complicating ulcerative prurigo nodularis is described in 2 patients who were having prurigo nodularis on dorsum of the feet for duration of many years. Biopsy specimens from the ulcerating nodules showed features of squamous cell carcinoma. This finding has not been previously reported. Squamous cell carcinoma should be considered in the evaluation of long standing ulcerative lesion of prurigo nodularis especially when not responding to conventional therapy.

Keywords: Squamous cell carcinoma, prurigo nodularis.

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Prurigo nodularis (PN) is a chronic dermatosis of unknown etiology; characterized clinically by multiple intensely pruritic discrete nodules occurring predominantly on the extremities; and histologicaly by marked hyperkeratosis and acanthosis with downward projections of the epidermis. There may or may not be an associated eczematous eruption.[1-3]

Bouts of severe pruritus occur when the patients are under emotional stress.[1] The pruritus is paroxysmal in nature ie. sudden in onset, intermittent, irresistibly severe but stops completely as soon as pain is induced by scratching to the point of damaging the skin.[4] This usually induces bleeding, infection and often scaring.[5,6]

Here, we describe the first report of 2 cases of squamous cell carcinoma complicating long standing PN, and consider their histopathological features in detail.

Case Reports.

Patient 1. A 50 year old man presented with 7 years history of severely pruritic nodules on the dorsum of the right foot.

Incisional biopsies showed typical features of PN. Six months later, one of the nodules started to develop central ulceration that was resistant to the usual treatment. The ulcer was excised and sent for histopathological examination, which revealed changes of squamous cell carcinoma. The patient was referred to the department of plastic surgery where a second deeper biopsy was carried out which proved the diagnosis of squamous cell carcinoma. The ulcerating nodule was then completely excised, followed by skin grafting. Good results were obtained after 3 months of follow up.

Patient 2. A 60-year old man, who had PN for 10 years duration on the left foot, confirmed histopathologically. He was referred to the department of dermatology with a 4-month history of a slowly growing ulcer on one of the prurigo nodules. Various medications were used by the patient with no benefit. Incisional biopsy was carried out from the ulcerating nodule that showed features of squamous cell carcinoma. The ulcerating nodules were then totally excised in the department of plastic surgery followed by skin graft. The patient did well after 3 months follow up.

Histopathology (H&E stain). In both patients, the previous biopsies from the nodules had shown typical

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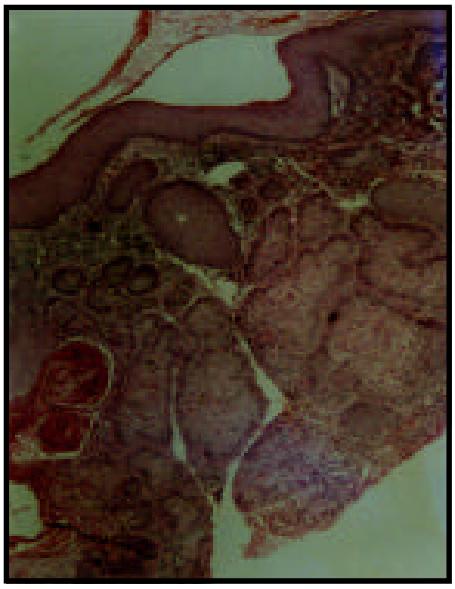

Figure 1 - Long-standing prurigo nodularis of patient 1 showing changes of squamous cell carcinoma. The separated islands of epidermal cells are invading the dermis with surrounding inflammatory intiltrate. Similar changes were observed in patient 2 (H&E stain x 40).

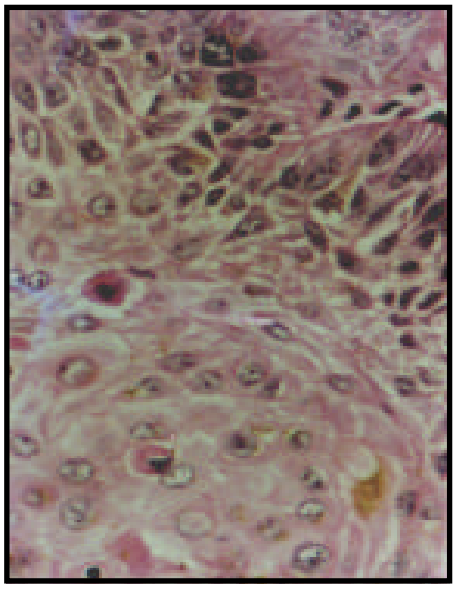

Figure 2 - The same lesion of patient 1 on higher magnification. The invading islands of cells show pleomorphism, anaplasia and mitotic figures. Similar changes were seen in patient 2 (H&E stain, x 400).

features of PN, consisting of marked hyperkeratosis, focal parakeratosis, abundant acanthosis with superficial perivascular inflammatory infiltrate, mainly lymphocytic. Biopsies from the ulcerating nodules revealed in addition to the above features, invasion of the dermis by separated islands of epithelial cells, many of them showing anaplasia, pleomorphism and mitotic figures. The dermal inflammatory cell infiltrate was characteristically surrounding but not invading the epithelial islands of cells. (Figures 1 & 2).

Discussion. It is well established that squamous cell carcinoma can complicate many scaring and ulcerative skin lesions such as ulcerative lichen planus, dystrophic epidermolysis bullosa and lupus vulgaris[7] but it has not been reported previously in long standing lesions of PN. The histopathological findings described in this report were in both cases in favor of squamous cell carcinoma rather than just a pseudoepitheliomatous hyperplasia. Although it may closely resemble squamous cell carcinoma grade I or II, pseudoepitheliomatous hyperplasia at the edge of an ulcer may eventually develop into true squamous cell carcinoma and even metastasize especially after chronic mechanical irritation such as repeated scratching in our 2 patients.[8]

Therefore, we recommend that squamous cell carcinoma should be taken into consideration when evaluating patients with long standing ulcerative lesion of PN; especially if not responding to conventional therapy.

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