KERATOACANTHOMA ARISING FROM A PSORIATIC PLAQUE – A RARE CASE REPORT

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ABSTRACT
Psoriasis is a chronic, systemic, immunologically mediated inflammatory dermatosis. Non melanoma skin cancers (squamous cell carcinoma and basal cell carcinoma) and lymphoproliferative disorders are well documented to occur over the plaques of psoriasis. Here in we report a case of benign tumour, Keratoacanthoma arising over a psoriatic plaque.

INTRODUCTION
Keratoacanthoma has been initially described by Sir Jonathan Hutchinson in the year 1880 and the present name was given by Freudenthal of Wroclaw in the 1940’s. (Sharada et al., 2016). It is a rapidly evolving benign tumour of the skin, composed of keratinizing squamous cells originating in the pilosebaceous follicles. Histologically, mimics well differentiated squamous cell carcinoma without nuclear atypia. It has a tendency to resolve spontaneously if left untreated. It presents as solitary or multiple, firm, round, flesh coloured or a red papulo-nodule, which may resemble molluscum contagiosum; if keratotic, mimics a viral wart. It most commonly arises over sun exposed surfaces.

CASE REPORT
A 54 years old male, with history of psoriasis vulgaris for the past 2 years, presented to our skin OPD with complaints of a raised skin coloured lesion confined within a psoriatic plaque on the right leg for the past 1 month. It initially started as a small raised lesion which rapidly progressed over a month, to attain the present size. There was no preceding history of trauma, pain or itching. Patient was on topical treatment with mid-potent corticosteroids on irregular basis. Dermatological examination revealed a solitary, 2 X 2 cm, round, well circumscribed pinkish to red coloured nodule with a central verrucous surface, overlying a scaly psoriatic plaque over the extensor of the right leg. [Figure 1] On palpation, the nodule was firm, immobile, and non-tender and did not bleed on manipulation. Scaly erythematous psoriatic plaques with tendency toward healing were seen over the extensors of both upper and lower limbs and over the soles. Scalp, palms, nails and oral mucosa was clinically normal. Systemic examination was clinically normal. Routine investigations were done and were within normal limits.

Excision biopsy was performed which showed mild hyperkeratosis, acanthosis, papillomatosis with regular elongated rete pegs and dilated tortuous blood vessels in the papillary dermis on the periphery (suggestive of psoriasis). [Figure 2 A] The adjacent tumour revealed discontinuity in the epidermis with a large keratin filled central crater with lipping of the epidermis on the sides like a buttress and a endophytic downward growth of the epidermis without any evidence of dermal invasion.
DISCUSSION

Psoriasis is a chronic inflammatory skin disease, with a well-defined genetic background and environmental influences. It is characterized by a complex alteration in the epidermal growth & differentiation, immunologic, vascular and biochemical physique. Apart from systemic co-morbidities, patients with psoriasis are also at increased risk of cutaneous malignancies, particularly in severe form of disease due to epithelial injury and also due to treatment with Phototherapy, topical tar, arsenic, systemic methotrexate, cyclosporine, mycophenolate mofetil and TNF alpha inhibitors. (Relhan et al., 2013) Psoriasis is associated with Non melanoma skin cancers (squamous cell carcinoma and basal cell carcinoma), lymphoproliferative disorders, cutaneous horn and more recently keratoacanthoma. (Soorya et al., 2016; Jayakar Thomas et al., 2015)

Keratoacanthoma is also known as Molluscum sebaceum. It has recently been re-classified as a well-differentiated SCC (keratoacanthomatous type) by the World Health Organization (WHO). (LeBoit et al., 2008) It is more frequent in white population and rare in dark skinned individuals. Both sexes are equally affected with a slight predilection for men. Keratoacanthoma commonly occurs in adulthood with a peak age of 55 and 65 years.

The onset is earlier in adolescence in familial type of KA. The etio-pathogenesis is linked to chronic sun exposure, contact with tar, mineral oil, trauma, immune suppressive states, chemical carcinogens, viral infections, genetic predisposition (HRAS mutation) and by use of BRAF inhibitors. (Christopher Griffiths et al., 2016) Unfortunately, majority of the causative agents of keratoacanthoma forms a part of the management of psoriasis and probably, explains the occurrence of KA’s in psoriasis.

Clinically, Keratoacanthoma presents as solitary and less commonly multiple rounded, flesh or red coloured dome shaped nodule with a central keratin plug over the face, forearm and dorsal aspect of hands; less commonly affects the thighs, chest, shoulders and scalp. Diagnosis is confirmed by biopsy. Typical histopathological findings include a central zone of keratin filled crater overlying to it is the hyperkeratotic epidermis; a peripheral zone formed of squamous cells with typical epidermal lipping. The proliferating keratinocytes in the lower layers of the epidermis shows the presence of mitotic figures, hyperchromatic nuclei and loss of polarity with evolution into more mature keratinocytes towards the centre of the lesion. These maturing cells have abundant eosinophilic glassy cytoplasm and no significant nuclear abnormalities.

The gold standard treatment for KA is surgical excision. (Musumeci et al., 2014) Medical management includes topical imiquimod, intralesional and systemic methotrexate, 5-fluorouracil, Bleomycin, Interferons, oral retinoids (acitretin), electrodessication, radiotherapy and photodynamic therapy.
CONCLUSION

Keratoacanthoma arising on psoriatic plaques is a rare entity. Hence this case is presented linking the etiopathogenesis of occurrence of KA in psoriatic plaques.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

REFERENCES: