SQUAMOUS CELL CARCINOMA ARISING FROM A PSORIATIC PLAQUE – A CASE REPORT

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ABSTRACT
Psoriasis is a chronic, relapsing, inflammatory and proliferative skin disease associated with cutaneous and systemic diseases. Patient with psoriasis are at increased risk of developing NMSC (non melanoma skin cancers) and lymphoproliferative disorders. We report a case of squamous cell carcinoma arising from a psoriatic plaque.

INTRODUCTION
SCC (Squamous cell carcinoma) is an epidermal keratinocyte tumour (Jayakar Thomas et al 2015; Jeevankumar et al., 2004) and the second most common non melanoma skin cancer after BCC. It is potentially destructive and life threatening if not identified earlier. Squamous cell carcinoma and other NMSC can occur in the severe form of psoriasis associated with PUVA and systemic therapy (Rita V Patel et al., 2009).

CASE REPORT
A 65 year old male, known case of psoriasis vulgaris on homeopathy treatment for past 5 years, presented to our OPD with complaints of pain over the back x 5 months, following which he noticed a growth on the psoriatic plaque over the back. No history of trauma, discharge or bleeding from the growth, loss of weight and loss of appetite. Patient is a known case of Type 2 diabetes mellitus and systemic hypertension and on regular treatment. No family history of psoriasis or malignancies.

On dermatological examination – multiple well defined erythematous scaly plaques are seen over the scalp, trunk and bilateral extremities. A 4 x 4cm yellowish, firm, proliferative growth, non-adherent to the underlying structures was present over the psoriatic plaque in the mid back [FIG 1 & 2]. No palpable lymph nodes. Nails – pitting, subungual hyperkeratosis and onycholysis are seen in all toe nails. Palms, soles and mucosa were normal. Systemic examination was normal.

All routine investigations (Complete haemogram, ECG, USG abdomen and chest X-ray) were normal.

Skin biopsy was taken from the proliferative growth and histopathological examination revealed epidermal proliferation with many horn pearls, individual cell keratinisation and lymphocytic infiltration in the dermis [FIG 3 & 4].

DISCUSSION
Psoriasis is a chronic inflammatory skin disease, with a well-defined genetic basis and environmental influence, characterized by a complex alteration in the epidermal growth & differentiation, immunologic, vascular and multiple biochemical abnormalities. Psoriasis patients are at increased risk of cutaneous malignancies in severe form of disease and on treatment with PUVA, topical tar,
arsenic and systemic therapy like methotrexate, cyclosporine [3], mycophenolate mofetil and TNF alpha inhibitor. Recent studies have shown increased expression of SCC antigen (squamous cell carcinoma antigen) and proliferation regulators like WNT 5A, STAT-1, defensin B4, Keratin 16, SERPIN B3 in psoriatic skin compared to normal skin. Biopsy specimen shows persistent activation of regulators of keratinocyte growth and differentiation like Src-family tyrosine kinases (SFKs) (Megha Gupta et al., 2013).

Squamous cell carcinoma is an epidermal keratinocyte tumour. It predominantly affects Caucasians in areas of high ambient sun exposure. The pathogenesis of SCC is multifactorial, includes UV exposure, ionizing radiations, trauma, chronic inflammation, chronic discoid lupus erythematosus, albinism, xeroderma pigmentosa, HPV (Shulstad et al., 2010), immunosuppressed individuals, chronic granulomas, chronic ulcers and scarring dermatoses like poikiloderma congenitale, porokeratosis of Mibelli and dystrophic epidermolysis bullosa. It is common in males. SCC commonly affects sun exposed areas like back of the hands and forearm, upper part of face, lips and pinna. It usually arises from premalignant lesion such as Bowen’s disease, actinic keratosis, leukoplakia etc.

Diagnosis is confirmed by biopsy. Histopathological examination reveals tumor consisting of irregular masses of epidermal cell that proliferate downwards into the dermis. The invading tumor mass is composed of varying proportions of normal cell and atypical cells which is characterized by increased mitosis, aberrant mitotic figures, hyperplasia and hyperchromasia of nuclei, absence of intercellular bridges and individual cell keratinization. Horn pearls present are characterized by concentric layer of squamous cells with increasing keratinization toward the center. The center shows incomplete and rarely complete keratinization. Keratohyaline granules are sparse or absent within the horn pearls. SCC is classified as well differentiated tumor, moderately differentiated tumor and poorly differentiated tumor. Histological variants are clear cell, adenoid, spindle cell, signet ring type, desmoplastic, papillary, keratoacanthoma, mucin producing SCC and verrucous carcinoma (Farideh Dehghani and Farina Binesh, 2015).

Metastatic risk factors are size, site and rate of growth, poorly defined borders, etiology, immunosuppression and histologic features like depth of the tumor, thickness, degree of differentiation, vascular and perineural invasion (Vivek V. Gurudutt and Eric M. Genden, 2010).

BCC, keratoacanthoma, solar keratosis and viral warts are some of the differential diagnosis for SCC.

Treatment is by multidisciplinary approach. Treatment options available are topical 5-fluorouracil, imiquimoid, cryotherapy, radiotherapy, laser therapy, surgical excision and Moh’s micrographic surgery.

In case of premalignant lesions, patient should be advised about reducing exposure to sunlight, systemic retinoids (reduce the development of new SCCs) (Nijsten TE and Stern RS, 2003) and regular follow up.

Figure 1 & 2: Clinical photographs showing 4 x 4cm proliferative growth over the psoriatic plaque in the back.

Figure 3: Histopathological picture showing epidermal proliferation with horn pearls and lymphocytic infiltrations.

Figure 4: Histopathological picture showing horn pearl.
CONCLUSION

Patients with long term severe psoriasis and on systemic therapy should be emphasized the necessity of regular follow up and histopathological examination to reduce the development NMSC.

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CONFLICT OF INTEREST:
The authors declare that they have no conflict of interest.

REFERENCES:

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