
Unusual presentation of basal cell carcinoma – a case report

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ABSTRACT

Basal cell carcinoma (BCCa) is a common skin cancer and is usually seen in Caucasian population across the world. Its occurrence is rare in Indians but its prevalence is high in western world. Although it is malignant lesion, it bears a very low mortality rates. This skin cancer is rare India. Recently we encountered a case of this disease with an un-usual clinical features which is being presented due to its rarity and in dark skin population.

Key words: Cutaneous malignancies, Basal cell carcinoma, Mho's surgery

Introduction

Basal cell carcinoma is a low grade, locally invasive carcinoma arising from basal cell layer of skin and comprise 65 per cent of all cutaneous malignancies and 90 per cent of them arise on the skin of the head and neck[1]. It has been attributed to be most prevalent cancer type among white-skinned populations worldwide, and particularly in industrialized Western societies [2]. It is uncommon in Asians (non-Indian population originating in Asia) and Black African races[3]. However, the occurrence in Indian population is so rare that no demographic data is available in Indian population.

Causative factors of BCCa are exposure to excessive actinic, ionizing and, ultraviolet (UV) radiation and they are accepted as most important causal factors.

Other causative factors are exposure to chemical carcinogens, and possibly infection with human papilloma viruses, ethnical differences, type of skin, chronic irritation, chronic inflammation, burns, skin lesions, immunologic, and genetic factors [4,5].

It is only locally malignant lesion that spread neither through lymphatics nor through the blood.

Khangri cancer, an a variant of skin cancer is seen in India in Kashmiri population who use khangri in extreme cold to keep their body warm. A study from India is available which shows that the occurrence of basal cell carcinoma on upper eyelid in 38.8% cases[6]. Chronic irritation, chronic inflammation, burns, skin lesions are other causal factors. Considering its rarity in Indians, we are presenting this a histopathologically proven case of BCCa to add one more case in the literature on BCCa from India.

Case Report

A 50 year old male patient reported to our out patients department with chief complaint of big, non healing ulcer on left side of face. The ulcer was so large and irregular in length it was of much concern to him due to disfigurement and difficulty in maintaining the facial hygiene. The patient's medical history was unremarkable but professionally he was gardener, working 6-8 hours in sun since past thirty years (Fig.1). The history of present illness revealed that he was well about 15 years back. Then he noticed a small nodule remained static for many years and then started increasing in size very slowly. Since nodule was initially painless for many years, he ignored it. But for the past 4-5 years it started increasing size and was

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slightly painful. It was occasionally rubbed during washing the face and changing the clothes or during professional activity. In addition it was got injured during routine activity as well due to one or other reason. He consulted many clinicians and received various treatment and dressings and all were of no relief. For the past six months the ulcer was a bit painful was bothering him due to large size, pain and disfigurement.

The ulcer thoroughly examined. There was a single ulcer starting 0.5 cm below the medial canthus of left eye extending through the lateral to lateral surface of nose and left prominence of cheek of making. It was 4.0 cm in length and width and depth was variable along the length. Over all the shape of ulcer was spindle shape. (fig 1). Its maximum depth was .2 - .3

cm. The edges were raised and rolled out with pearly color at edge. Base of the ulcer was clear, free of any discharge, and pinkish red. Surrounding skin was normal without any change in sensation. The ulcer and margins were non tender. A well demarcated ulcer was present which had eroded the entire soft tissue in the areas on involvement, the cheek and nasolabial fold etc. The underlying structures were freely mobile. There was neither involvement of basal bone nor regional lymphadenopathy. Within past two months the ulcer grew very rapidly and approached to its current dimension. In the past few months the patient had restricted himself to home and was taking medications, and dressings without any reasonable benefit.



Fig.1: shape of ulcer

Provisional diagnosis of squamous cell carcinoma was made. Differential diagnosis included squamous cell carcinoma, actinic keratitis (ulcerated), infected sun burn. Investigation done: haematological investigation were within normal limits. Incisional biopsy confirmed infiltrative type of basal cell carcinoma. After radiographic assessment, the lesion was excised with 1 to 1.5 cm clearance in surrounding skin. Mohs surgery was performed. The histopathological findings confirmed the précised removal of pathological tissue.

Histopatholgy

Samples taken from all the major involved anatomical sites were examined under microscope using 4x and 40x magnification. Low power of magnification (Fig. 2a) after Hand E staining revealed multi centre spread of tumour with irregular proliferation of malignant cell with peripheral palisading and invasion of deeper tissue and ulceration of skin. Underhigh power magnification (Fig. 2b). 40X. tumour cells are seen as arranged in sheets with peripheral pallisading. Cells are plump with hypochromatic nuclei and eosinophilic cytoplasm. There is adequate peripheral clearance and the

underlying basal bone is spared, which was evident macroscopically and microscopally.

Discussion

Basal cell carcinoma is a rare cutaneous malignancy in India and in black population and its occurrence has been reported in dark skinned population as 1-2% and Australia has been reported to bear highest rate of basal cell carcinoma in the world [7]. Due to its rare occurrence in dark skinned individuals such lesions are occasionally misdiagnosed and the clinical picture of the lesion is such confusing that they are taken up as a case of squamous cell carcinoma. It is therefore mandatory that all chronic ulcers should be biopsied and treatment plan decided according to histopathological diagnosis.

There are different clinicopathological forms of BCC and they vary in their invasiveness potential. Various classifications have proposed for this lesion. Pickering and Nickel and Hashimoto and Lever have describe up to six different types of tumour[8-9] . However, Sloane has described three principle types and our observations on this case are based on their

descriptions[10]. The three types are (a) Nodular: These are well circumscribed, elevated tumours. They grow slowly and are generally respond well to simple treatment. Microscopically they exhibit a well-defined, palisaded basal layer and basement membrane. (b) Infiltrative: These are indurated, atrophic or scarring lesions, often with an indistinct margin that blends with normal epidermis. Infiltration is uncontrolled and irregular and the lesion frequently extends much further than is apparent clinically. Recurrences are often associated with this type[11]. Microscopically the tumour nests have irregular margins with long, infiltrating cords of cells and a palisaded basal layer is poorly developed. (c) Superficial, multicentric, which usually involve large areas of skin with single or multiple plaques, crusted erosions and zones of scarring. Microscopically, closely packed masses of basaloid cells proliferate from multi-focal sites in the epidermis and they always infiltrate superficially. Infiltrative lesions are technique sensitive to manage due to disproportionate infiltration of lesion and treatment requiring 1-2 cm safety margin for excision and reconstruction.

There is a paucity of information available concerning the development of such lesions in Indian population and most reports are based on the challenge associated with surgical treatment and reconstruction. In our case the neoplasm preferentially invaded the soft tissue of nasolabial fold, involving some portion of cheek and progressed towards the medial canthus of eye sparing the lateral nasal cartilage on the affected side. This pattern of tissue destruction is very characteristic that cartilaginous structures are resistance to invasion[12]. This tumour, although appears very silent, but exhibits a variable and selective mode and time period to invade the tissues and its dissipation. In this patient the lesion started many years back, grew very slowly, growth occurred for many years and became aggressive after penetration of cheek tissue.

Further, microscopic samples suggested that undermining of marginal epidermis was restrained at its deep edge by subcutaneous fat and there was no bone invasiveness.

The case presented appears to be case of transformation from nodular to infiltrative type sine it is possible that pattern of growth and the clinicopathological type of tumour may shifted from one to other type and this shift may be allied to the penetration of deeper structures.

The important features in the case history of our case are delay in treatment. Jackson has reported the average growth rate of a BCC as approximately 0.5 cm per year. This rate of growth could verify the observation of Jackson and matched with the history of disease in our case. However, it is not true every time. Occasionally the delay doesn't lead to an extensive lesion and remain localized for long periods [13-14]. We treated our case after removal of affected tissue using Mohs microsurgery, with safety margin of 1-2 cm and reconstruction with forehead flap. After a long period of follow-up there is no recurrence.

Recurrence in initial stage is difficult to identify due to the presence of scar tissue which obscures the early signs of recurrence[15].

Occurrence of BCCA in white population has been thoroughly studied. Its rarity in dark colored skinned individuals has been studied by Matsouka *et al* [16]. They presented that an increase in skin pigmentation results in reduced penetration of photons into the deeper layers of the epidermis, a finding demonstrated by Matsuoka *et al* who showed a reduced UVB stimulated vitamin D₃ synthesis in Asians and Black Africans compared to Caucasians. By diminishing the amount of UV exposure, photon induced damage to the basal cells of the epidermis may be minimized, possibly leading to a reduced rate of malignant transformation.

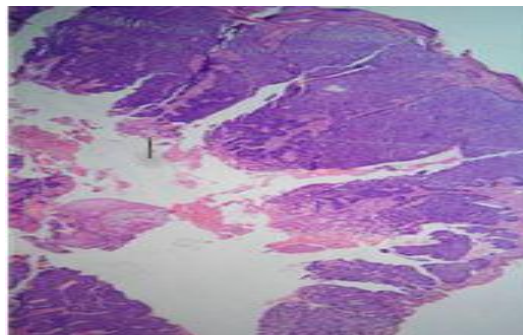


Fig. 2a: 4X – H & E stain section show multi centre tumour with irregular proliferation of malignant cell with peripheral palisading and invasion of deeper tissue and ulceration of skin

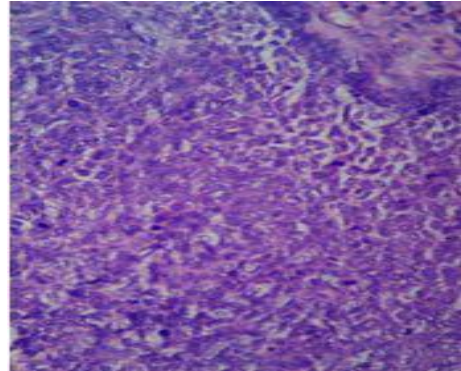


Fig. 2b: 40X – tumour cells arranged in sheet with peripheral palisading. Cells are plump with hyperchromatic nuclei and eosinophilic cytoplasm

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