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An Interesting Case of Basal Cell Carcinoma of the Face in Xeroderma Pigmentosum– Excision and Single Pedicle Advancement Flap

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Abstract
Xeroderma pigmentosum (XP) is an autosomal recessive disorder characterized by extreme sensitivity to ultraviolet radiation and more than a 1,000-fold increase in the risk of cutaneous malignancy, basal cell carcinoma being the most common followed by squamous cell carcinoma and melanoma. It is a highly disfiguring disease with multiple recurring lesions requiring multiple surgical treatments. The need for cosmetically appropriate surgeries is of utmost importance in these patients. The paper describes the case of a 31year old Indian male, diagnosed with Xeroderma pigmentosa, who presented with basal cell carcinoma of the left cheek and was treated with wide local excision and a single pedicle advancement flap with a good cosmetic outcome and margin clearance.
Keywords: *Xeroderma Pigmentosum, Basal Cell Carcinoma, Advancement Flap*

Introduction

Xeroderma pigmentosum (XP) is an autosomal recessive disorder characterized by hyper sensitivity to ultraviolet radiation and more than a thousand fold increase in the risk of cutaneous malignancy, basal cell carcinoma being the most common followed by squamous cell carcinoma and melanoma.[1][2][3] Basal cell carcinoma usually occurs on areas of the skin that have been in the sun, most often the nose[4]. Since long time the conventional treatment option is surgical excision with free safety margins. A narrow free surgical margin would imply a higher recurrence rate.[5]

A proper surgical excision would leave a soft tissue defect which would pose to be a cosmetic issue. This coupled with the patients expectation for an improved quality of life post surgery would warranty cosmetically sound high quality reconstruction.[6] Primary closure and local flaps give a better cosmetic and functional outcome as compared to free flaps or skin grafts.[7] A single pedicle advancement skin flap is a flap that is mobilized by undermining and advancement into a defect without altering the plane of the pedicle. This technique can be considered for use in repair when there is skin available on only one side of a wound. Basic square or rectangular defects lend themselves well to single pedicle advancement flaps [8] This paper discuses the use of single pedicle advancement flap in covering the defect post excision of the basal cell carcinoma of face.

Case Report

We present a case of a 31year old male patient who was a known case of Xeroderma pigmentosum presented with a swelling over the left side of the cheek close to the alar crease which was insidious and progressive for a duration of 6 months.

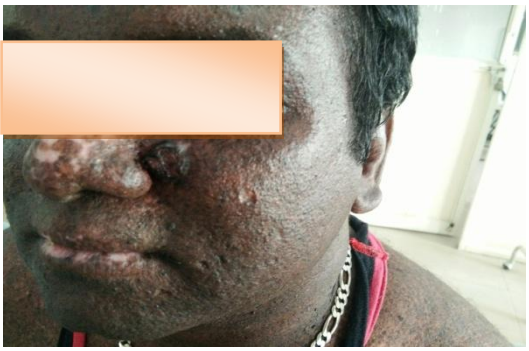

Fig. 1 Basal Cell Carcinoma left cheek

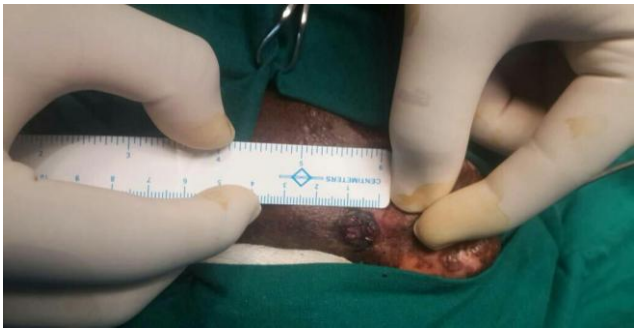

Fig.2 Assessment for margins and reconstruction

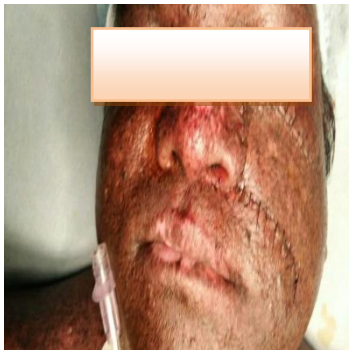

Fig 3 Post operative Image

There was no history of pain, discharge, bleeding, itching or crusting There was no history of any other complains. The patient was moderately built and well nourished with mosaic skin appearance and cloudy cornea.

Local examination revealed a 1x1x0.5cm hyper pigmented lesion over the left side of the cheek (fig.1) close to the alar crease which was non tender and firm in consistency arising from the skin. There were no other swellings elsewhere over the body. Systemic examination was normal

The patient underwent wide local excision of the lesion with a 4mm margin under local anaesthesia. The defect post excision was closed using a single pedicle advancement flap. Two parallel divergent lines were drawn on the skin from the adjacent corners of the defect. The length of the flap was measured to be 2mm more than the length of the wound. Incisions were made along the drawn lines and the skin undermined to include the subcutaneous tissue. The flap was advanced over the wound and tension free interrupted sutures were applied with 5-0 nylon. Post operatively the patient developed facial edema which subsided in the following three days. Suture removal was done after 7 days

Histopathological examination showed features suggestive of basal cell carcinoma with tumor negative margins

Discussion

In this case, the basal cell carcinoma was excised three dimensionally with tumour free margins and reconstruction. Appropriate margins for malignant tumors depend on the cancer type, tumor size, tumor irregularity, and time elapsed from onset. In cases of basal cell carcinoma, an appropriate excision margin would be 2 to 5 mm from the tumor, whereas in cases with a small-sized lesion of <2 cm in diameter, it would be approximately 4 mm. On the other hand, in cases with a lesion of >2 cm in diameter or with a substantial delay after onset, the margin would be 1 cm, and in recurrent cases, it would be >1 cm.[5][6]. There is no clear criteria for the selection of a single type of reconstructive technique amongst many available.[9] primary closure is the most common technique used to close soft tissue defects. For small and medium sized defects, local flaps would be a better choice[10]. Because flaps have the advantage of carrying their blood supply with them to maintain viability, they can be placed over less-than-optimal wound beds, including exposed bone or irradiated tissue. Advancement flaps can be used in patients with a good health

status. Single pedicle advancement flaps are the simplest of local flaps. They provide an advantage of matching the color and texture of the excised skin.[8]

Conclusions

Single pedicle advancement flap is a feasible option for the treatment of small to medium size facial defects, its advantage being a relatively simple technique with better cosmetic outcome.

Acknowledgement

The heading of the Acknowledgment section and the References section must not be numbered.

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