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A CASE REPORT: POST EXCISION DEFECT OF BCC ON LATERAL CHEST WALL REPAIRED BY LIMBERG FLAP

Surgery

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ABSTRACT

Basal cell carcinoma (BCC) commonly known as rodent ulcer is one of the most common types of cutaneous cancers globally. The most common location of BCC is the face and almost 80% of the cases happen above the line joining the angle of the mouth to the ear lobule. More than two-thirds of BCC cases are found to occur on sun-exposed areas of the body, rest occurring on areas of the body not exposed to sunlight, thus highlighting the genetic susceptibility of basal-cell cancer. In this paper, we are summarizing a case of a rare site of BCC with the review of literature in a 49-year-old male patient who presented with a lesion over the right side chest wall. A tentative diagnosis of BCC was made and the patient underwent an excision biopsy followed by Limberg flap. Histopathology report confirmed that it was a case of a rare variant of BCC

KEYWORDS

Basal cell carcinoma, Lateral Chest wall, Limberg flap, Rhomboid transposition flap

INTRODUCTION

Basal cell carcinoma (BCC) commonly known as rodent ulcer is one of the most common types of cutaneous cancers globally. BCC is believed to arise from hair follicle cells and is therefore found almost exclusively on hair-bearing skin. Most lesions are found on sun-exposed mask areas of the head and neck but non-sun-exposed areas are also at risk. These tumors tend to grow slowly but when untreated can lead to invasion of local structures including muscle, cartilage, and bone.

In this paper, we are summarizing a case of a rare site of BCC in a 49-year-old male patient who presented with a lesion over the right side chest wall. A tentative diagnosis of BCC was made and the patient underwent an excision biopsy followed by Limberg flap. Histopathology report revealed that it was a case of a rare variant of BCC which is difficult to recognize as its presence is poorly defined indurated or sclerotic plaque which can be mistaken for a scar.

CASE REPORT

A male patient of age 49 years visited the Dept. of General Surgery. He complained of a lesion over his right side chest wall for last 1 year. Initially, it was painless, without any itching or bleeding. As the lesion progressed, the patient complained of pain & itching at the lesion site. The lesion also grew in size and but didn't change color over time. The patient was planned for surgical excision after a provisional clinical diagnosis of BCC [Figure 1].

Figure 1: Basal Cell Carcinoma at Right Chest Wall

The patient was subjected to excision biopsy under general anesthesia and a wide local excision of the lesion was done after taking appropriate margins. A defect of around 8 cm × 5 cm was created. As the defect was large, primary repair was not feasible; so it was repaired with local Limberg flap [Figure 2]. The postoperative course was normal and stitches were removed on the 9th day after the operation. Histopathology report confirmed it to be a BCC of 3 cm × 3 cm × 1 cm with free margins. The patient followed up for 1 year regularly and is currently asymptomatic.

Figure 2: Defect covered with Limberg flap

DISCUSSION

BCC accounts for at least 32%[1] of all cancers globally. Of skin cancers other than melanoma, about 80% are basal-cell cancers[2]. In the United States, about 35% of white males and 25% of white females are affected by BCC at some point in their lives[2]. The number of incidents of skin cancers has progressively increased, particularly that of cutaneous melanomas over the last few decades[3].

Both BCC and squamous cell carcinoma (SCC) are common in whites but rare in blacks and Indians. Contrast to one-third malignancies of nonmelanoma skin cancer in whites, in Indians only 1–2% of cancer occurs on the skin.[4] Also, these cancers mainly affect sun-exposed areas like neck and face (88–90%)[5]. Although complete data of incidence are not available, various cancer registries in India reported the cumulative incidence of skin cancer varying from 0.5 to 2 per 100 000 population[6].

Symptoms

Individuals with a basal-cell carcinoma typically present with a shiny, pearly skin nodule. However, superficial basal-cell cancer can present as a red patch similar to eczema. Infiltrative or morpheaform basal-cell cancers can present as a skin thickening or scar tissue – making diagnosis difficult without using tactile sensation and a skin biopsy. It is often difficult to visually distinguish basal-cell cancer from acne scar, actinic elastosis, and recent cryodestruction inflammation.

Etiology

The development of BCC is multi-factorial and is related to various genotypic, phenotypic and environmental risk factors. Ultraviolet radiation is considered to be the dominant risk factor for the development of BCC. Another important risk factor is immunoseparation. The long term immunoseparation therapy has shown to increase the risk of BCC about tenfold. Exposure to ionizing radiation is known to increase the risk of BCC and is often present decades after initial exposure. Chemical exposure such as arsenic, tar, mineral oil has been associated with an increased risk of BCC.

Sites

The commonest site of BCC is the face; 80% arise above a line from the corner of the mouth to the ear lobe. Literatures cite posterior neck[7], scrotum[8], palm[9], nipple[10], areola[11], shotgun scar[12], buttock, perineum, axilla, genital region[13], conjunctiva[14] and Submandibular gland[15] as unusual or rare site of BCC. The occurrence of BCC on the scrotum is extremely rare, accounting for less than 0.05% to 0.19% of all BCC cases[16-18]. Very few cases of BCC on the pudendum have been reported in the literature. We are reporting another rare site as lateral chest wall. Only a few cases have been reported in the literature of BCC on chest wall[19-20].

Limberg flap

The Limberg flap is conceptually one of the easiest flaps to construct. The Limberg flap is a series of communicating equilateral triangles. All angles are 60°, which means that every side of both the defect and the flap is equal in length. This orientation creates a flap that is the same size as the defect to be excised. Any flap angle other than 60° theoretically involves either widening or compression of the flap. An elliptical defect at the donor site remains after the flap is rotated to fill the rhomboid defect. This defect can be closed primarily with the appropriate undermining of the surrounding tissue.

The Limberg flap can be used to close defects almost anywhere on the body. It is versatile in that a random pattern flap can be raised from any one or all corners of the rhomboid. The defect is filled with tissue of the same thickness and color and with good vascularity. Whether Limberg flap is feasible or not depends on the liability of the adjacent skin, which can be determined by pinching various areas between the thumb and forefinger.

Treatment

Simple surgical excision is effective for all types of BCCs. The cure rate approaches 99% when the histological margins are clear. The recommended margin is 5 mm; recurrence is more when the margin of resection is less than 4 mm.

A biopsy should be performed in all lesions suspicious for BCC. The most common methods used in the treatment of BCC are wide excision, curettage and electrodesiccation, Mohs micrographic surgery, cryosurgery, and radiation, while topical skin creams with imiquimod or 5-fluorouracil may be used to treat superficial basal cell carcinoma[21].

CONCLUSION

BCC is a common cutaneous malignancy and hence amenable not only to early detection but also to a potential treatment. For rare cases like ours, a high degree of suspicion is required to diagnose BCC at such unusual sites like lateral chest wall. With the use of judiciously designed flaps such as Limberg flap, excellent cosmetic results with good primary defect repair can be gained.

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