

## Primary Basal Cell Carcinoma (BCC) involving skin of breast adjacent to nipple areola – a rare site case report and literature review.

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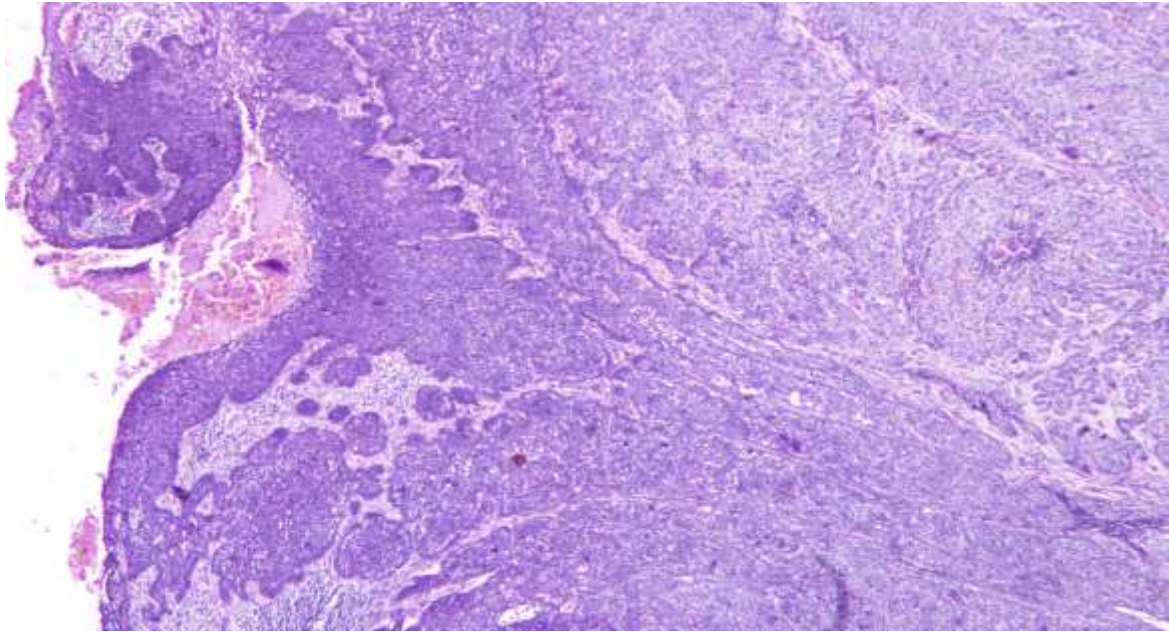
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**Abstract:** Basal cell carcinoma (BCC) is a nonmelanocytic skin cancer (i.e. an epithelial tumor) which frequently occurs in sun exposed areas of head and neck region, is the most common cutaneous malignancy. Skin over breast adjacent to nipple areola complex (NAC) is a rare site for BCC to arise. Diagnosis here is, important because BCC in this location mimic breast cancer, which may behave aggressively. This paper outlines the case of 62 years old male with BCC of skin over breast adjacent to NAC.

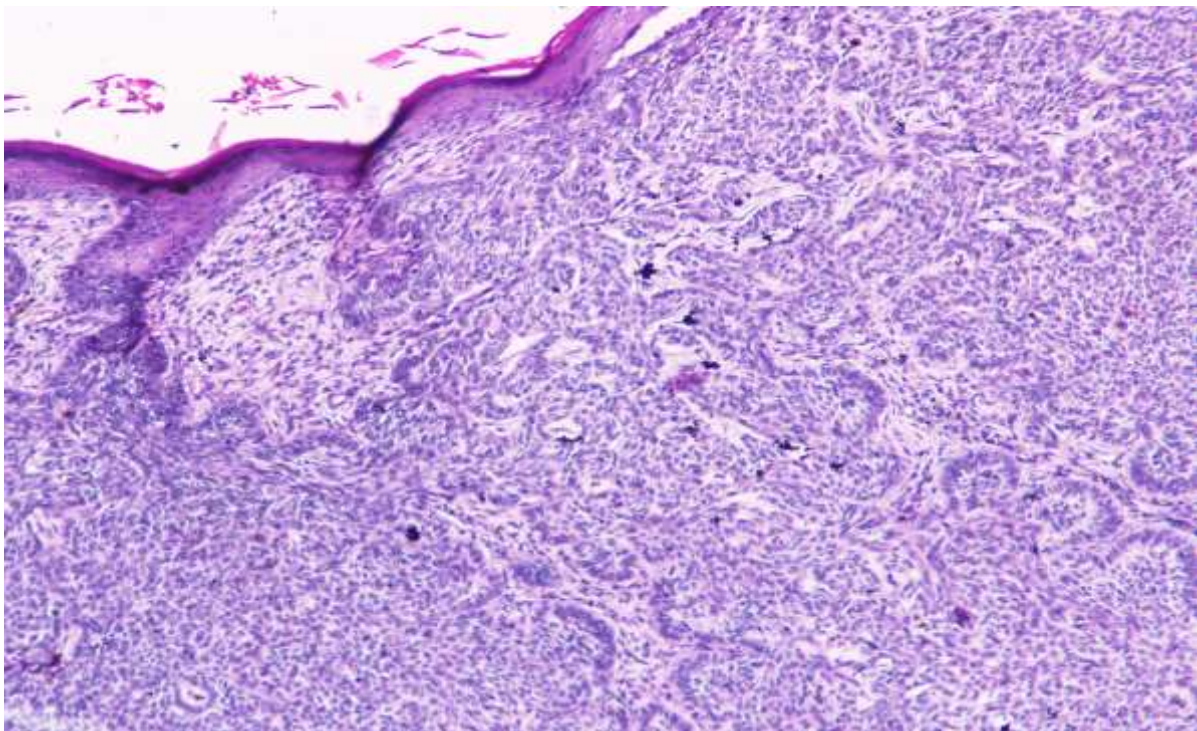
**Key words:** Basal cell carcinoma (BCC), Nipple areola complex (NAC), Male breast, A rare site.

**Introduction:** BCC is most common locally invasive tumor of skin [1], also known as rodent ulcer. Skin over breast adjacent to NAC is a rare site. Most cases on this site are reported from men, due to higher likelihood of breast area being sun exposed in this gender. Clinically, its resemblance varies from chronic dermatitis, to breast cancer, to BCC [2,3]. We present a case of 62 years old male having noduloulcerated, bled lesion over right breast skin adjacent to NAC.

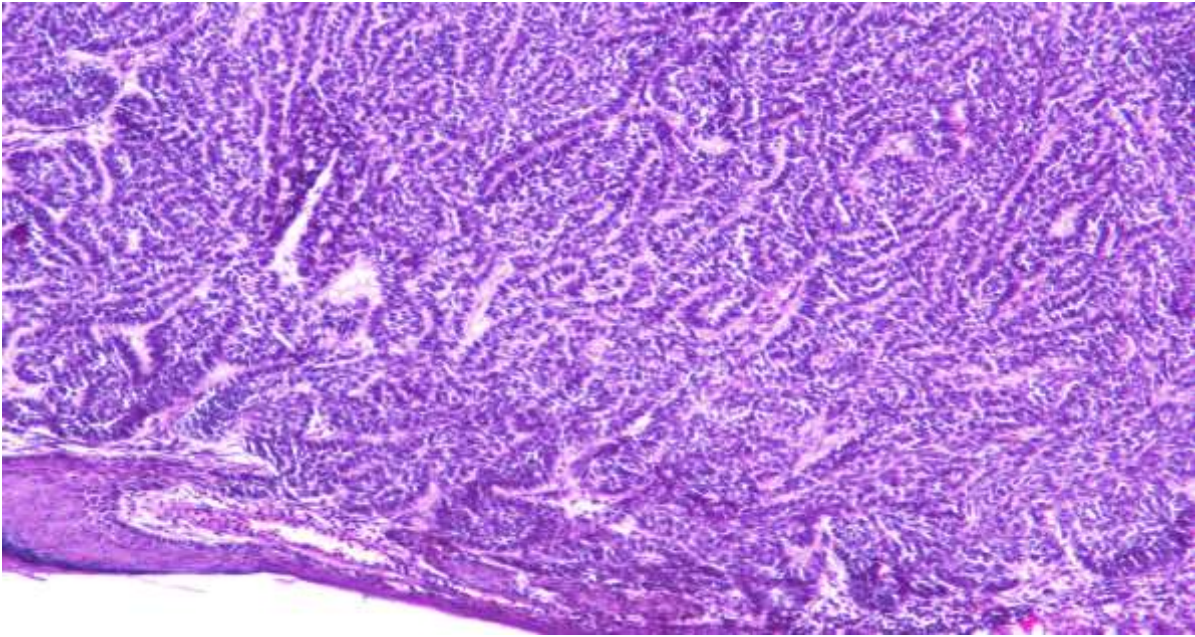
**Case report:** Our patient is a 62 years old male, present with a nonhealing small noduloulcerated lesion which measured 4cm\*3cm in dimensions over breast skin adjacent to NAC. Lesion is tender, bleeds when rubbed by clothes. Crusted areas are present over it. It started with a pearly papule and becomes noduloulcerated lesion over a time period of one year. Lesion had central ulceration, rolled out margins. Nipple areola was spared and lesion was not adhered to underlying structure. The regional lymph node were not palpable. As a occupation our patient is a farmer, so generally breast area exposed to sun. Skin biopsy was done for histopathological examination. Grossly specimen consists of a nodular soft tissue mass measuring 5cm\*4cm in dimension with skin cover over one side having central depressed ulcerated, crusted lesion of 2cm\*2cm over it. Cut section showed grey white to grey black areas. The tissue bits were processed by routine histological processing method and blocks were made and stained with hematoxylin and eosin stain by routine conventional method. Microscopic examination showed epidermis and dermis. Epidermis showed proliferating basaloid cells extending into dermis and also eroded at places showing necrotic haemorrhagic and inflammatory base. The tumor cells were round to oval with hyperchromatic nuclei and scanty cytoplasm with peripheral palisading arrangement (i.e the cells at periphery of the tumor cells islands tends to be arranged radially with their long axis in parallel alignment). The tumor cells are also arranged as interconnecting cords in between mucinous matrix and often surrounded by fibroblasts and lymphocytes. A retraction artefact separates the basaloid cells from surrounding basophilic, variably mucinous stroma. A final histopathological diagnosis of BCC was made. Rest of the investigations normal. Patient followed for any recurrence but not have any recurrence.



**Figure 1:**Microscopic picture of skin over breast adjacent to NAC showing epidermis and dermis.Epidermis eroded at a place with base having necrosis and haemorrhage(H&E 4X)



**Figure 2:**Microscopic picture of skin over breast adjacent to NAC showing epidermal basaloid cells proliferation extending into the dermis(H&E 10X)



**Figure 3:**Microscopic picture of skin over breast adjacent to NAC showing palisading arrangement of tumor cells(H&E 10X)

**Discussion:** BCC arises from basal cells which are small round cells found in lower layer of epidermis. They invade dermis but seldom invade any other part of body. DNA alterations involve, which mostly occur from damage caused by exposure to sunlight. Most of mutations activate Hedgehog pathway signalling [4,5]. It is common malignancy of skin especially western world, faired skin people and incidence continuous to increased worldwide [6]. Generally 85% located on head and neck, most frequently on face, most common location on nose [7]. 15% on trunk and extremities [8]. Infrequent sites penis [9], vulva [10,11] or perianal skin. Skin over breast adjacent to NAC is also a very rare site. Robinson reported first case of rodent ulcer of male breast in a 60 years old male in 1893 [12]. BCC over breast shows male predominance which is thought to be caused by increased exposure of chest area of male to sun. In our case patient was a farmer as a occupation, so chest area usually xposed to sun which is a risk factor for BCC. Other predisposing factors are immunocopromised status, exposure to radiation, arsenic tar [13], prior burns, genetic predisposition, sunbathing, scars, burn complications [14], xeroderma pigmentosa [15], previous trauma, vaccination or even tattoos. BCC over breast has no predilection of a particular type of BCC. But our case present with noduloulcerated lesion which is most common type of BCC. Histologically lesion shows proliferating nests of basaloid cells arising from epidermis and extends into dermis. BCC is locally invasive and rarely metastasize (<0.5%). BCC over breast has increased metastatic potential when involve NAC due to rich angiolymphatic vessels in subareolar region which give rise to easy tumor spread to lymph node. Also tumor invade lactiferous duct. In our case NAC not involve so little risk of metastasis. The differential diagnosis of BCC over breast skin adjacent to NAC are erosive dermatitis, contact chronic dermatitis, eczema, malignant melanoma, breast cancer, other malignant skin tumors. Treatment ranges from medical treatment, radiotherapy, laser, wide excision, simple mastectomy with lymph node dissection. In present case, no lymph node involve, no NAC involve, patient underwent surgical excision with one cm margin and followed, no recurrence noted.

**Conclusion:** BCC can develop at most unusual site including breast. The kind of presentation that our patient had can be mistaken for carcinoma breast and can lead to unnecessary mutilating surgery which is a lot of psychological trauma and economic burden for patient. So proper history, clinico-histopathological

examination should be done. A proper multidisciplinary approach should be adopted. Long term follow up of such patient might be advisable.

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