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Original Research Paper

General Surgery

A RARE CASE OF BASAL CELL CARCINOMA WITH PAROTID INVASION: A CASE REPORT

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ABSTRACT Despite the known features of aggressive BCC, invasion of deeper structures as parotid gland, temporal bone and facial nerve are rarely reported and the management of such tumors is always challenging. In the absence of Moh's micrographic surgery, frozen section assumes ultimate importance. Moreover contemplating with rarely used flaps as mastoid fascial flap,which is not very well described in literature, can be of much help occasionally.

KEYWORDS :

INTRODUCTION:

Basal cell carcinoma is the most common skin malignancy presenting usually as slow growing, less invasive lesion. Although most of the times it has an indolent predictable clinical course , occasionally, it behaves aggressively with deep invasion with regional and distant metastasis. Factors such as tumor size, duration, histologic type, and perineural invasion are considered as markers of the aggressive BCC phenotype. BCCs located in embryonic fusion planes, such as the periauricular region, are thought to exhibit deep extension and subsequently high recurrence rates, although this theory has been challenged and remains controversial. Aggressive cases of BCC involving the parotid gland have been rarely reported. We report a case of aggressive basal cell carcinoma involving the parotid gland.

CASE REPORT:

A 70 yr old lady, who was an agricultural labourer, presented with ulcer of 10 years duration over the right ear, below and behind the ear. Patient gave history of no pain or discomfort over the region,normal neck movements but she had started herself on native treatment withtopical medications within 2 years of onset of the ulcer, which was ineffective and the ulcer had gradually increased in size. There was an ulcer of size 4 *3.5* 2cm seen in right infra auricular region encroaching the lobule ofright ear, with nodular pigmentation for about 3cm anteriorly into the retromandibular groove, and posteriorly into the postauricular sulcus for 3cms.Few satellite lesions also were seen over the postauricular region. The ulcer margins were typically well defined, pigmented & beaded with an indurated base and had fixity to underlying structures. There was no evidence of lymphadenopathy or facial weakness. Biopsy of the ulcer revealed basal cell carcinoma. MRI of the region showed 5.6*4.7*2.7 T2 isointense T1 hypointensemultilobulated lesion in right tragus ear lobule and postauricular region with the lesion apparently infiltrating right parotid gland – superficial lobe and sternocleidomastoid at mastoid attachment.There was no extension to bone or distant metastasis.

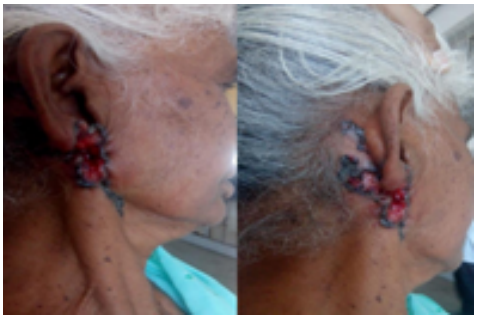

Figure 1: ulcer involving right ear lobule and adjacent regions

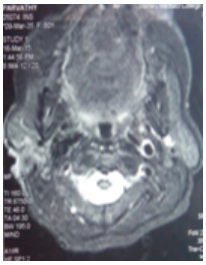

Figure 2 : MRI picture showing T2 isotense T1 hypointense multiloculated lesion in parotid

Surgery was proceeded with partial auriculectomy and wide exicision of skin with 1.5cm margin followed by superficial parotidectomy along with segmental resection of portion of sternomastoid at its mastoid attachment. Ideally this situation would warrant Moh s surgery for clearance. As we did not have facilities for that, we resorted to Intra-op frozen section and the margins were found to be negative. Facial nerve & its branches were preserved .In ideal situations it would require partial ear reconstruction, the flaps planned were deltopectoral flap, supraclavicular artery island flap, mcgregor s forehead flap. But in our case in view of poor general condition and cardiac reserve of the patient, we planned a local fascial flap from mastoid fascia(mastoid fascial flap) to cover the bony and cartilaginous portion which was covered by a skin graft , while cervicofacial advancement of defect margin done to cover the parotid region and skin graft for remaining defect. Operative specimen showed nodular type of basal cell carcinoma with tumor free margins.

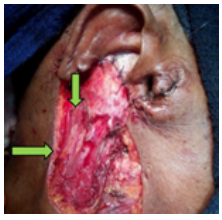

Figure 3 : mastoid fascial flap

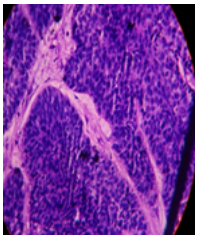

Figure 4 : HPE of biopsy showing basolid cells

DISCUSSION:

Basal cell carcinoma is a skin cancer arising from basal layer of nonkeratinocytes and stroma of pilosebaceous follicle. BCCs account for approximately 70 % of all malignant diseases of skin – four to five times more common then SCC.The largest incidence is seen in white population.The sonic

hedgehog signalling pathway (mutation in PTCH1 gene on ch9q) has been considered as pivotal role in pathogenesis.UV induced mutations in tumor suppressor gene p53[1]. Genetic syndromes – xerodermapigmentosum, nevoid BCC syndrome, unilateral basal cell nevus syndrome.Most BCCs are slow growing, relatively non aggressive tumors with a minority having aggressive behaviour with local tissue destruction and rarely metastasis occurs if left untreated. The common morphological types are nodular, micronodular, cystic , superficial, pigmented, adenoid, infiltrating, sclerosing (morpheic), keratotic,basosquamous, fibroepithelioma of pinkus.Nodular is the most common variant (60%) which has a raised pearly pink papules with depressed tumor centre and raised borders – classical rodent ulcer appearance[2,3].Histologically it can be classified as

i) undifferentiated – pigmented, superficial, sclerosing, inf iltrating
ii) differentiated – nodular , adenoid, keratotic

Of these micronodular, infiltrative, basosquamous, sclerosing & morpheicshows aggressive growth pattern.Infiltrating, morpheaform, basosquamous are associated with invasion of underlying tissue and difficult to treat. BCC located in embryonic fusion planes such as periauricular region is thought to exhibit deeper extension and subsequently high recurrence rate because of its strategic location. Metastasis occurs in case of long standing lesions – mostly to regional lymph node , lungs ,liver, bone ,skin. Incidence is less than 0.5%.

Management involves ■ electrodessication – low risk tumors ■ Moh s micrographic surgery , which has advantages of maximal conservation of tissue, low recurrence rate and is the treatment of choice for morpheaform, poorly delineated, infiltrative , recurrent bcc ■ Excisional surgery – for lesions less than 2cms margin of 4mm given; for larger lesions 10mm margin given ■ Reexcision for recurrence[5-7].

Radiotherapy is given for poor surgical candidate, Doubtful resection margin or positive margins after surgery or Adjuvant to surgery for aggressive lesions

Photodynamic therapyis application of photosensitizing agents(δ ALA, ME) followed by irradiation with light source. Topical pharmocological agents used are Imiquimod, 5 FU, Tazarotene and Oral drugs being vismodegib and sonidegib, which act by sonic hedgehog signalling pathway[8]. Prevention can achieved by using sunscreens with spf 50 are being advised to protect from UV rays

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