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CASE STUDY

SQUAMOUS CELL CARCINOMA OF SCALP

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ABSTRACT

Squamous Cell Carcinoma (SCC) arises from an epithelial cell lineage, and depending on the site of occurrence can have variable presentation and prognosis. The mean age of presentation is typically in the sixth decade of life, twice as prevalent in men. Sunlight exposure for long periods can lead to SCC of the cutaneous variety. History and Clinical examination are diagnostic, but can be supplemented with a edge biopsy, CT and MRI. Management entails a variety of treatment modalities, ranging from Electrodessication, Mohs Micrographic Surgery, Wide Excision, Radiotherapy and Chemotherapy. We present a case of 45 year old female, with SCC involving the scalp, managed by Wide Local Excision with Split Thickness Skin Graft and Rotational Flap. Postoperative HPR Suggests adequate margins and patient is on a 6 monthly follow up schedule to rule out recurrence.

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INTRODUCTION

Squamous cell carcinoma (SCC) is the most common form of skin cancer after basal cell carcinoma (BCC) (Walling *et al*., 2004). It is biologically more aggressive than basal cell carcinoma (Poulsen, 2004). It arises from malignant proliferation of the epidermal keratinocytes (Ahn *et al*., 2011). It usually occurs at sites of high cumulative chronic ultraviolet light exposure, and 80% to 90% of these cancers develop on the sun exposed skin of the head and neck in older white men (Ahn *et al*., 2011). SCC comprises locoregional malignant tumors with more rapid and severe spread, high metastasis potential through blood and lymphatic vessels.

Case presentation

A 45 year old female, presented to OPD with the complaint of a swelling in the back of the scalp since 6 months. On examination, it was a solitary ulceroproliferative growth 9cmx8.5cmx3cm in size. The growth had irregular margins, everted edges, bleed to touch, immobile, tender with induration of the surrounding skin. On CT examination, a heterogeneously enhancing lesion involving the scalp in the occipital region with no invasion of calvarium was noted. Histopathological examination of edge biopsy revealed well differentiated squamous cell carcinoma.

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This lesion was subjected to a Wide Excision with 2 cms margin with drilling of involved, eroded outer bone cortex and reconstruction by mobilizing bucket handle scalp flap SSG for Donor Site. Patient was discharged on POD 14 and referred to a Radiational Oncologists for Post Op Radiotherapy.

DISCUSSION

Malignant skin tumors may arise from the surface epithelium or its cutaneous appendages (Soma *et al*., 2007). These tumors rarely occur in the scalp but in general, unless promptly identified and managed, tumors of the scalp will grow rapidly and infiltrate the underlying cranium and occasionally the dura (Soma *et al*., 2007). As part of the management of these lesions, reconstruction of large scalp and/or skull defects often poses difficulties and significant surgical challenges (Soma *et al*., 2007). Lang *et al* recommend that scalp tumors be managed in an aggressive and appropriate manner because of their association with morbidity and mortality (Lang *et al*., 2006). There have been rare reports in which skin tumors of the scalp with direct intracranial invasion, including SCC, BCC, Basosquamous carcinoma, adnexal carcinoma [Giant eccrine adenocarcinoma, benign dermal cylindroma, Familial cylindromatosis (Turban tumor syndrome)], Merkel carcinoma, Marjolin's ulcer, dermatofibrosarcoma, sebaceous carcinoma, melanoma (Figure 3) (Abo Sedira *et al*., 2006; Denewer *et al*., 2011; Donovan and Person, 2006; Emsen, 2008; Etlik *et al*., 2005; Ferreira *et al*., 2010; Gregoire *et al*., 2011; Gupta *et al*.,

2005; Kim *et al*., 2007; Marakovic *et al*., 2008; Poulsen *et al*., 2004; Schroeder *et al*., 2001; Sengul and Hadi-Kadioglu, 2009; Soma *et al*., 2007; Tan *et al*., 2006; Urbanski *et al*., 1985; Wyld *et al*., 1996).

Figure 1. Pre Operative

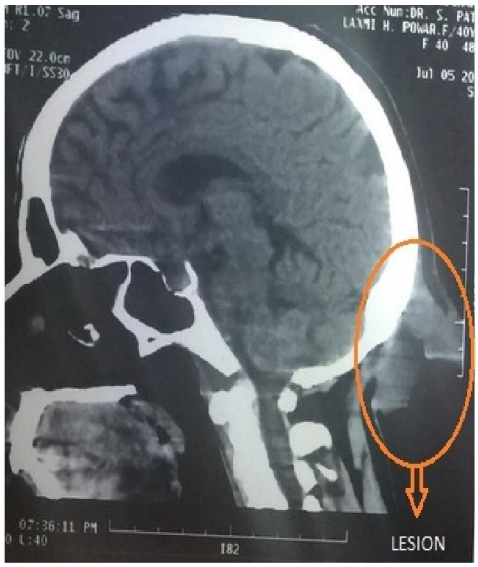


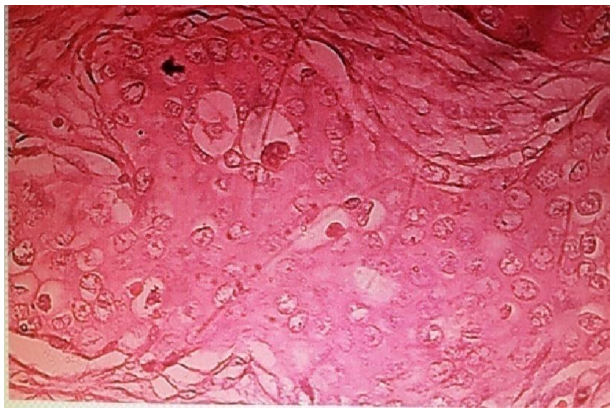
Figure 1. CAT Scan

Figure 3. Intraoperative

Figure 4. Specimen

Figure 5. SSG

Figure 6. Rotational Flap



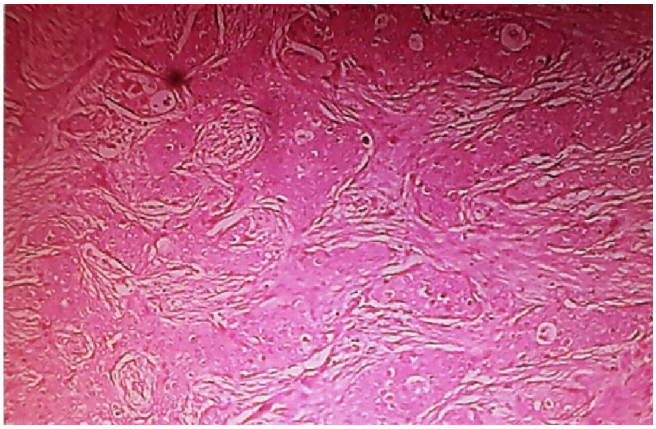


Figure 7 & 8. HPR

All reported cases had begun as growing ulcerative lesions which were neglected by patients.In case of tumors with CNS involvements, the clinical findings vary depending on the affected area. SCCs are cured with the treatment modalities, which may include topical chemotherapy (5-fluorouracil), topical immune response modifiers, systemic chemotherapy, immunosuppression reduction, cryosurgery, photodynamic therapy, electrodessication and curettage, local excision, and Mohs micrographic surgery (MMS) (Ahn *et al*., 2011; Neubauer *et al*., 2010). Soma *et al*. recommend aggressive surgical management offers for scalp cancer with involvement of the skull and dura with or without involvement of the brain (Soma *et al*., 2007). A multidisciplinary approach (plastic surgery, neurosurgery, neuro-oncology and pathology) is very important in preoperative course, intraoperatively and in postoperative course (Soma *et al*., 2007). Involvement of the dura and bone necessitates a bone dura resection. Large defects can be reconstructed with skin grafts, rotational flaps, distant pedicled flaps, transposition flaps following tissue expansion or free flaps (Denewer *et al*., 2011; Soma *et al*., 2007). Radiation therapy and/or chemotherapy have been used with different response rates (Soma *et al*., 2007). Tumors which involved and infiltrated the superior sagittal sinus preclude complete dural resection because of the significant risk of venous thrombosis and resulting venous infarction (Soma *et al*., 2007). Prognostic factors of SCC of the skin include histologic features (differentiation, thickness, depth of invasion, and perineural involvement), clinical size, etiology, immune status of the patients, and anatomic site of the tumor (ear, lip, nasolabial creases, periorbital, and preauricular regions) (Papadopoulos *et al*., 2006). An aggressive surgery is the essential of the head and neck skin tumors (SCC, basal cell carcinoma, and basosquamous carcinoma) which extend into the CNS, because of their association with morbidity and mortality as in our case. In conclusion, we present an elderly patient with a large and aggressive scalp SCC. Early diagnosis and aggressive surgery are mandatory to regain best possible recovery for scalp malignant tumors.

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