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Case Report

A Rare case report: Granular cell tumor of the scalp

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Abstract

Granular cell tumor is a soft tissue neoplasm that originates in the nervous system and arises at virtually any body site, but is mainly found in the skin, oral cavity or digestive tract. Most are benign and reportedly malignant cases are rare, occurring in only 1% or 2% of cases. We report a case of granulocytic tumor on scalp, a rare site.

Keywords: GCT – granular cell tumor, scalp.

1. Background

Granular cell tumor is a soft tissue neoplasm that originates in the nervous system and arises at virtually any body site, but is mainly found in the skin, oral cavity or digestive tract [1-3]. Most of them are benign and reportedly malignant cases are rare, occurring in only 1% or 2% of cases.

2. Case Report

A female, 44 years, presented to OPD with swelling on scalp since 3 year. The patient had no other symptoms. The swelling was slowly progressive; 7 x 6 cm located in occipital area around 5cm from the ear pinna and 3cm from the occipital protruberance. The borders were well defined with irregular surface with FNAC showing granular cell tumor. CT scan showed no intracranial extension. Wide local excision was done and closed using trapezius flap. Histopatholgical examination confirmed the diagnosis of granular cell tumor of the scalp.

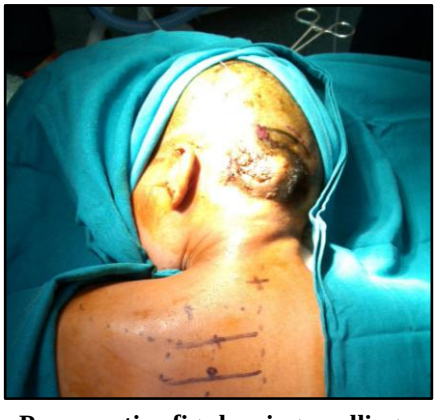


Figure 1: Preoperative fig showing swelling over scalp.

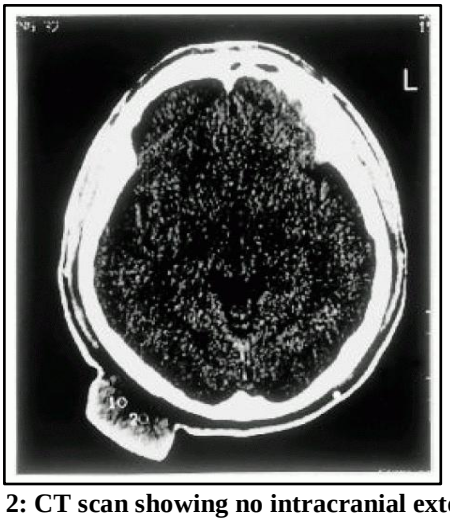


Figure 2: CT scan showing no intracranial extension

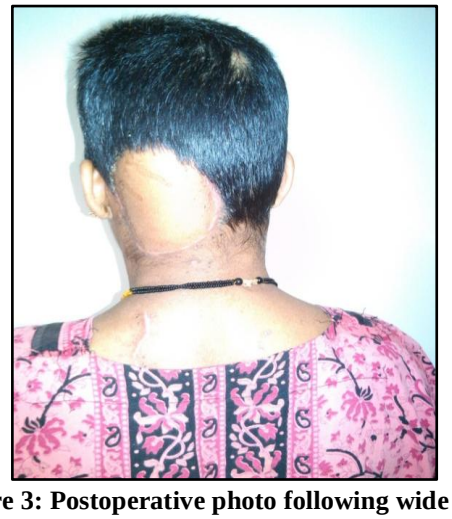
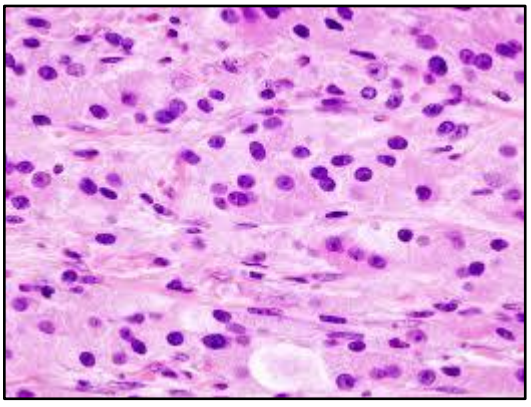


Figure 3: Postoperative photo following wide local exicision with trapezius flap closure.

Fig 4: Histopathology of the tumor



3. Discussion

Granular cell tumor was first reported by Abrikossoff [1] by the name of granular cell myoblastoma. One of its characteristics is that eosinophilic granules are contained in the cytoplasm of cells. Since the positive rates for S-100 protein and neuron specific enolase are high, currently it is thought that this tumor originates from Schwann cells. They account for an incidence of 0.5% among soft tissue tumors. The tumor is commonly found in those aged 10 to 50 years old, and more often in women than in men. About 2% of all granular cell tumor cases are malignant [4-7].

Granular cell is uncommon, mainly occurring on the skin, tongue and oral cavity as a single nodule. The disease in 30% to 45% of cases affects the skin, followed by the area of the head and neck, where the most frequent location is intraoral in the tongue and the soft and hard palate. Other locations affected are the breast, the gastrointestinal tract, the respiratory tract, the thyroid gland, the urinary bladder, the central nervous system, and female genitalia. Occurrence on the scalp, skeletal muscle is rare.

Fanburg Smith and colleagues[8] proposed the following six criteria to determine whether a tumor is malignant or not: (1) the presence of necrosis, (2) the emergence of spindle cells, (3) a vacuolar nucleus with an enlarged nuclear body, (4) increase in nuclear division (2 mitoses/10HPF), (5) increase in the nucleoplasmic ratio, and (6) polymorphism. If none of these diagnostic criteria are met, the tumor is considered to be benign. If one or two criteria are met, the tumor is considered to be atypical, and if three or more criteria are met, the tumor is considered to be malignant.

Immunohistochemical analysis has shown a strong and consistent positivity for protein S-100, a finding supporting the hypothesis that GCT is of peripheral nerve sheath origin [9].

Granular cell tumors are typically slow growing, well circumscribed, firm and rounded. Histopathology of benign tumour shows large polyhedral cells arranged in sheets with abundant eosinophilic granular cytoplasm [10]. The nuclei are relatively small and mildly pleomorphic with prominent nucleoli.

Surgical excision with adequate free margins is the treatment of choice. Presently, chemotherapy and radiotherapy treatments cannot be expected to be effective, with surgical resection being the primary option [4-7]. Resection with adequate margins is necessary because the tumor has no capsule and is proliferation invasive.

4. Conclusion

Granular cell tumor is a rare tumor which is often misdiagnosed. Complete resection with disease free margins is usually curative for benign GCT. Follow-up is required due to recurrence and malignant transformation.

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