Giant Benign Schwannoma on Scalp Causing 'Double-head'

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Abstract- Schwannomas are tumors derived from Schwann cells. They are usually small and comparatively rare on scalp. A 25-year old woman presented with huge mass on posterior side of the scalp that gave the appearance of 'double-head'. The mass was excised and reconstruction was achieved by primary closure. Histology proved to be a benign schwannoma. The patient is well at 6-months of follow up. Giant benign schwannoma on scalp is extremely rare. Clinicians that came across the giant tumors of the scalp should suspect this possibility as these tumors have favorable prognosis.

Key Words: Head tumor, Giant schwannoma, Double-head appearance

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INTRODUCTION

Schwannoma is a tumor of nerve sheath. These tumors develop from Schwann cells. Schwannomas are usually benign and small. Large schwannomas are rare. The most commonest benign schwannoma is acoustic neuroma. We report a giant benign schwannoma on scalp that gave the appearance of a 'double-head'. There are only two reported cases of giant schwannoma of the scalp, both were malignant.

CASE REPORT

A 25-year-old woman presented with a huge, solitary, painless, gradually enlarging mass over occipital region for 10 years (Fig. 1). She was unable to lie supine and needed to sleep in lateral position. The mass was 18 ×15×15 cm in size and touched the posterior part of

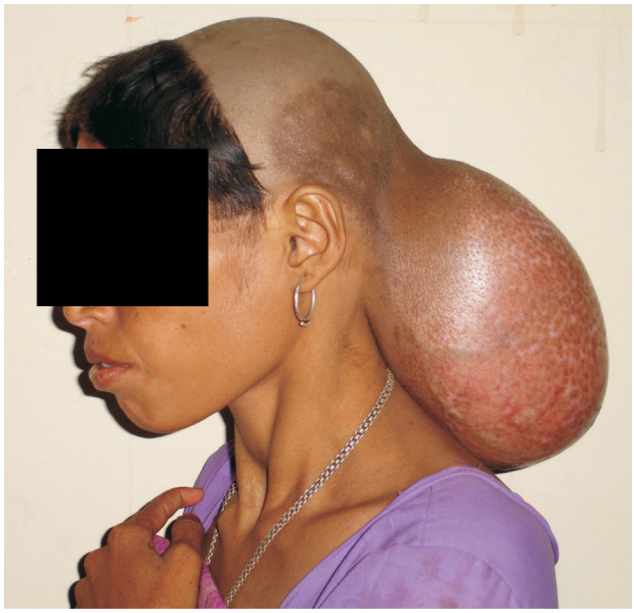

Figure 1. Giant schwannoma on posterior scalp.

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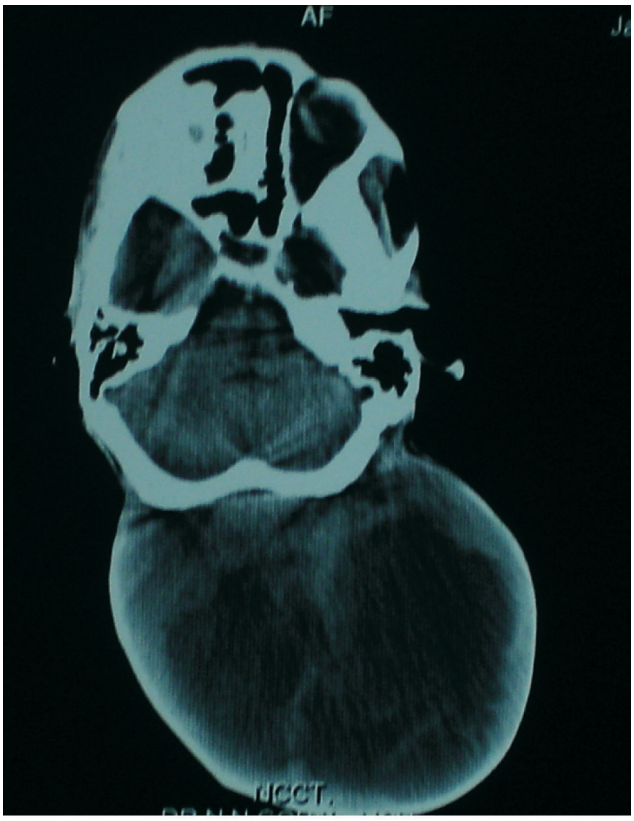

Figure 2. CT scan showing no invasion of the cranium.

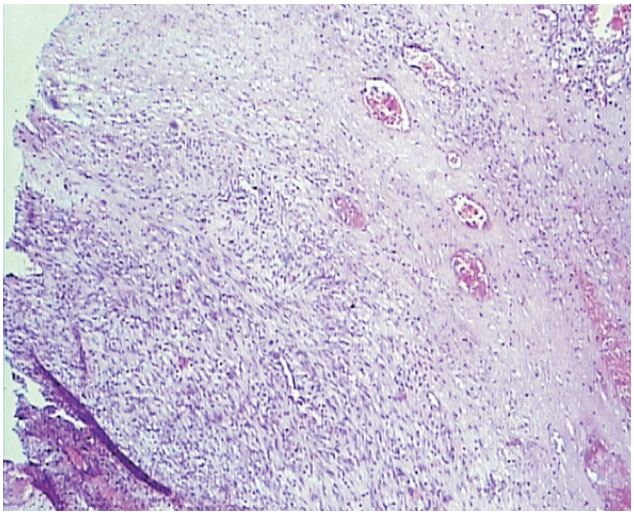

Figure 3. Section from the mass showing hypercellular and paucicellular myxoid areas with dilated and congested blood vessels (H&E, ×40).

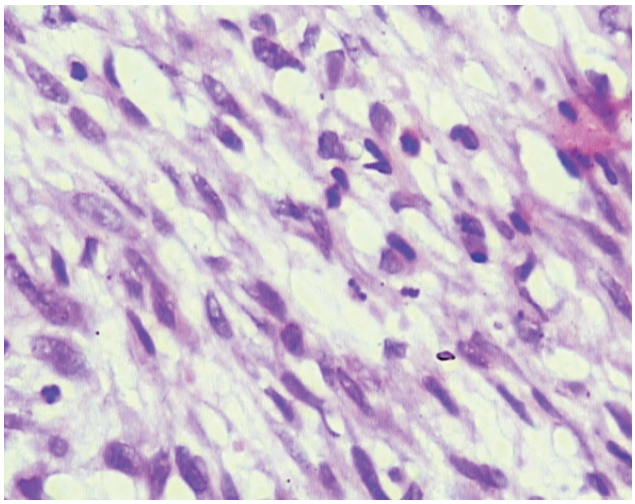

Figure 4. Spindle shaped cells with plump spindle shaped nucleus and occasional mitotic figures (H&E, ×320).

the neck. It gave an appearance of 'double-head'. The surface of mass was bosselated with ulceration at distal pole. Consistency was variable with pigmentary changes. The mass was mobile without transilluminancy or reducibility. Lymph nodes were not enlarged. CT scan showed extracalvarial solid-cystic lesion without invasion of the bone (Fig. 2). The mass was excised and the reconstruction was achieved by primary closure. Cut surface of the lesion showed variegated appearance. Histopathology showed encapsulated tumor with cystic and solid areas. There were hypercellular and paucicellular myxoid areas with dilated and congested vessels (Fig. 3). Spindle shaped cells with plump spindle shaped nucleus and occasional mitotic figures were seen at higher magnification (Fig. 4). Patient was well at 9-months of follow up with no recurrence at the same site or other sites.

DISCUSSION

Schwannomas are benign, slowly-growing, encapsulated tumors of nerve sheath origin that are found most commonly in the extremities[1]. Schwannoma is also the most common mediastinal neurogenic tumor[2]. Its histology generally displays a biphasic pattern with areas of

highly ordered cellularity (Antoni type A) and less cellular areas where a highly myxoid matrix predominates (Antoni type B). The CT appearance has been described as a well-circumscribed, inhomogeneous mass of low density, which can be explained by the following microscopic pattern: hypocellular areas (Antoni type B) adjacent to more cellular regions (Antoni type A) and cystic degeneration[1].

Hagiwara et al.[3] described a huge schwannoma on right thigh in a 52-year-old woman that was 20×15×12 cm in size and 2250 gm in weight. Kececi et al.[4] found a schwannoma on right arm of a 72-year-old woman. It was 15×8×7 cm in size. Both cases had excision of the tumor with good prognosis. Our case had a more rare site, i.e., scalp.

Demir and Toyol[5] reported a malignant schwannoma on scalp in a 80-year-old man. The tumor was ulcerated. It was excised and reconstructed by transposition scalp flap. We were able to close the defect by primary closure. Fukushima et al.[6] reported a malignant schwannoma of the scalp in a 38-year old man that was excised. It was 210 mm in the largest diameter, and was ulcerated, hemorrhagic, multilocular and non-mobile. The patient died due to metastasis 4 months after excision. The present case had ulceration with nonmobility. However, it proved to be benign without any areas of malignancy. Majed et al.[2] found a huge schwannoma in posterior mediastinum for which complete resection of the mass and bilobectomy were done due to the middle and lower lobe destruction. In spite of the large volume of the mass, the patient did not experience any frank paresthesia or pain.

Thus, our case is the first case of giant benign schwannoma over scalp. Because of its extremely rare occurrence, clinicians who came across the giant tumors of the scalp should suspect this possibility.

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