

Trichilemmal cysts of scalp: Imaging findings

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ABSTRACT

A trichilemmal cyst is a cystic lesion that forms from the hair follicle. They are also known as Wens. They are smooth nodular mobile swellings of the scalp which may be tender or non-tender and may run in families. Usually multiple, they are common in the occipital scalp region but can also occur in chest, abdomen, back, vulva, and pubis. Here, we present the case report of a 45-year-old woman with multiple trichilemmal cysts of the scalp.

Keywords: *Popcorn-like calcification, Scalp, Trichilemmal cysts*

Trichilemmal cysts, also known as Wens, are benign cystic lesions of the scalp which arise from the hair follicle. Trichilemmal cysts occur in 5–6% of the population and 2% of these cases progress to proliferating pilar tumors. They are well-defined lesion which is common in women of age group 50–60 years and most commonly in the occipital region but can also occur in the chest, abdomen, back, vulva, and pubis [1,2]. Usually, cystic lesions of the scalp are mistaken for the more common benign lesions of the scalp such as a dermoid cyst and sebaceous cyst, but in case of multiple cystic lesions in the scalp with calcifications, the possibility of trichilemmal cyst should always be considered. We report the case report of a 45-year-old woman with multiple trichilemmal cysts of the scalp.

CASE REPORT

A 45-year-old woman reported to the neurological outpatient department with complaints of vertigo and headache for 3 days. She also had a history of painless multiple swellings for 1 year. No significant family history noted. On examination, the patient was conscious and cooperative. The power was normal in all the limbs and no focal neurological deficits. The patient was vitally stable with a pulse rate of 72/min, respiratory rate of 16/min, and BP of 120/80 mmHg.

A computed tomography (CT) scan was done which showed ischemic foci in the bilateral frontal lobes, with well-defined soft tissue lesion in the parietal scalp measuring approximately 3 mm × 5 mm (Fig. 1a). Another well-defined lesion noted in the occipital scalp region (Fig. 1b). Both the lesions showed thick calcifications. A magnetic resonance imaging (MRI) was done which showed an isointense lesion on T1-weighted (T1W) (Fig. 2) and hypointense lesion on T2-weighted (T2W) images (Fig. 3a and b). On gradient images, an area of blooming was noted in the lesions (Fig. 4a and b). No evidence of restriction of diffusion was noted on

diffusion-weighted MRI. A three-dimensional reconstruction image of the calcification showed popcorn-like configuration (Fig 5). Treatment was offered in the form of enucleation of the lesion in parietal scalp region. On follow-up after 1 month, the patient was stable with no fresh complaints.

DISCUSSION

Trichilemmal cysts are often benign in nature but can have malignant potential and may progress to rapidly proliferating lesions known as proliferating trichilemmal cysts or the pilar tumors also called turban tumors. They were first described in 1966 by Ye *et al.* [3]. The usual clinical presentation includes a painless long-standing subcutaneous masses and nodules which may grow rapidly following trauma. Complications of trichilemmal cysts include superimposed infection and pressure necrosis of adjacent structures due to mass effect [4].

On CT scan, cysts are usually well defined with large chunks of calcifications which are pathognomonic. On MRI T1W images, they are hypo-isointense, and on T2W, they are hypointense due to the nature of cystic fluid and calcifications. Often multiple, the cysts are confined to the scalp. In a study by Lopez-Rios *et al.*, proliferating trichilemmal cysts are reported as large and irregular lobulated masses which tend to be invasive or cause mass effect on adjacent structures, they may cause erosions of the bones and extend intracranially [5]. Kim *et al.* studied two cases of proliferating trichilemmal tumors one in lower lip which is a very rare location, another one in the neck and described their imaging findings [6].

A wide range of differentials includes implantation epidermoid, dermoid cyst, sebaceous cyst, or parasitic cyst. Management includes enucleation for simple trichilemmal cysts, whereas wide local excision in cases of proliferating trichilemmal cysts due to its malignant

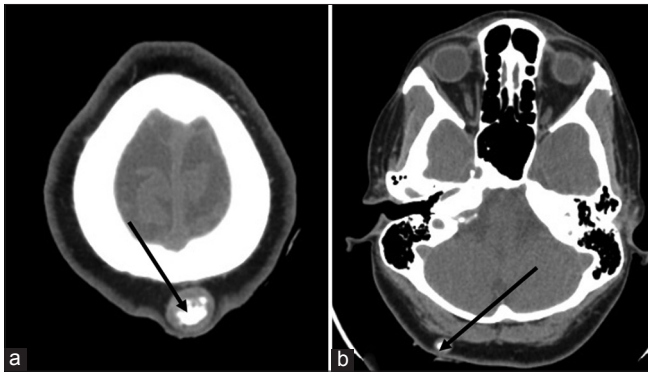


Figure 1: (a) Axial computed tomography (CT) image showing soft tissue lesion with thick, chunky “popcorn-like calcification” in parietal scalp region (HU=+350) (arrow); (b) axial CT image showing soft tissue lesion with thick, chunky “popcorn-like calcification” in occipital scalp region (arrow)

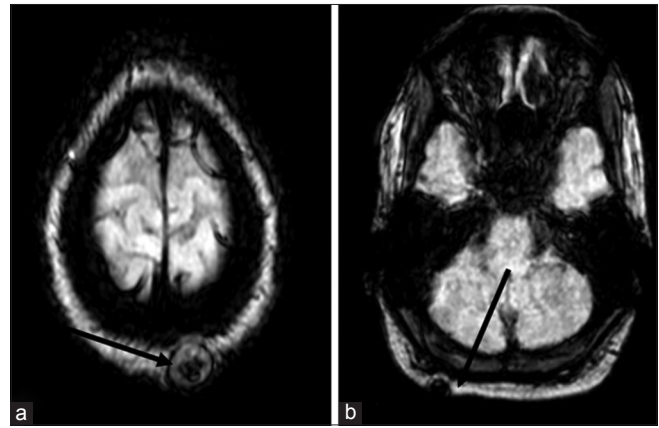


Figure 4: Gradient echo images showing blooming in the central calcification in the lesions in (a) parietal and (b) occipital scalp regions (arrows)

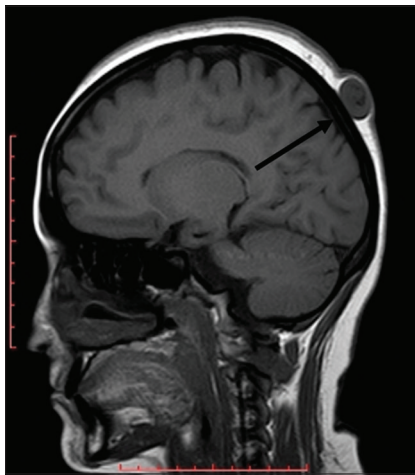


Figure 2: Sagittal T1-weighted magnetic resonance image showing isointense signal of the lesion in parietal scalp region (arrow)

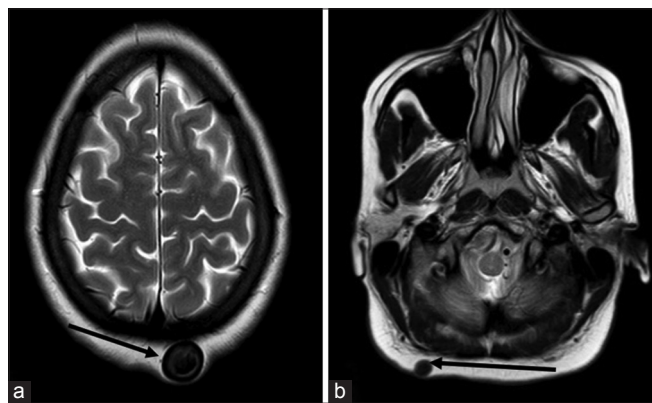


Figure 3: Axial T2-weighted magnetic resonance images showing hypointense signal in the lesions due to calcification in (a) parietal and (b) occipital scalp regions (arrows)

potential and to prevent recurrence. Antibiotics are given in case of secondary infection. Rarely, these lesions are known to metastasize [7].

CONCLUSION

Imaging of trichilemmal cysts is important for its early diagnosis and excision, to prevent the complications and malignant transformation.

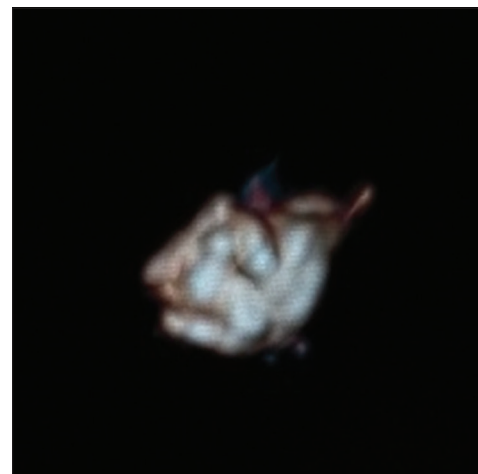


Figure 5: Three-dimensional reconstruction image of the calcification showing popcorn-like configuration

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