

## A rare case of nasal cysticercosis mimicking a nasal dermoid

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### Abstract

Cysticercosis, caused by infestation with the pork tapeworm *Taenia solium*, is known to commonly involve the brain, muscles and subcutaneous tissue. Diagnosing cysticercosis can be difficult as its clinical presentation is usually non-specific. When involving subcutaneous tissue, it can present as firm, non-tender, solitary or multiple nodules. We report a case of subcutaneous cysticercosis at the nasion mimicking a nasal dermoid.

**Key words:** Cysticercosis; *Taenia*; Nose

### Case report

An 11-year-old girl from North India presented to the ENT department with a history of swelling over the nasal bridge, of four years' duration. The lesion was painless and had not changed in size significantly since first noticed. There was no history of associated nasal obstruction, seizures or decreased visual acuity.

On clinical examination, the swelling was 1.5 cm in diameter and was mobile and non-tender, with a smooth, normal skin surface. Eye movements and anterior rhinoscopic examination were normal. A computerised tomography (CT) scan (Figure 1) did not reveal intranasal or intracranial involvement. The patient was clinically diagnosed as having a nasal dermoid and was posted for surgical removal.

At surgery, a translucent, cystic swelling measuring 1 × 0.8 × 3 cm was removed. As the initial clinical diagnosis was a nasal dermoid, a more common condition, a pre-operative clinical photograph of the lesion had not been taken.

Histopathological examination revealed a thin-walled cyst filled with pale, clear fluid. The fibrous tissue wall was densely infiltrated by neutrophils, eosinophils, lymphocytes, plasma cells and multinucleate giant cells. The cyst contained the larval form of the parasite *Taenia solium*, with an invaginated protoscolex and calcareous corpuscles (Figure 2).

### Discussion

Infestation with the larval form (cysticercus cellulosae) of the porcine tapeworm *T. solium* is called cysticercosis<sup>1</sup> and is endemic in many parts of the world, including Asia and Latin America.

Such infestation can result from ingestion of contaminated food, through the transfer of ova from hands into mouth or from formites. Ingested eggs burrow into venules, through which they are carried to distant sites.<sup>1</sup> The common sites are cerebral, ocular and subcutaneous

tissue. Lesions can occur in the heart, lungs, kidney, liver, breast, soft tissue, tongue and skeletal muscle.<sup>2</sup> Cerebral cysts can produce seizures, hydrocephalus, dementia or meningitis. Involvement of subcutaneous tissue can result in firm, non-tender, solitary or multiple subcutaneous nodules which can be biopsied.<sup>1</sup>

These nodules contain the larval forms of *T. solium* (cysticercus) or else calcified material. Hence, they can be demonstrated radiographically and may be confused with lipoma or epithelioma. Pre-operative CT and/or magnetic resonance imaging (MRI) evaluation must be performed in order to identify intracranial extension of skull base pathology and to facilitate surgical planning.<sup>3</sup> Denoyelle, in his study of 36 children with nasal dermoid sinus cysts, concluded that MRI should be used to confirm any suspected cases of intracranial extension.<sup>4</sup> A positive diagnosis is



FIG. 1

Computerised tomographic scan showing a well defined, oval, soft tissue density lesion over the nasion, with no intranasal or intracranial involvement.

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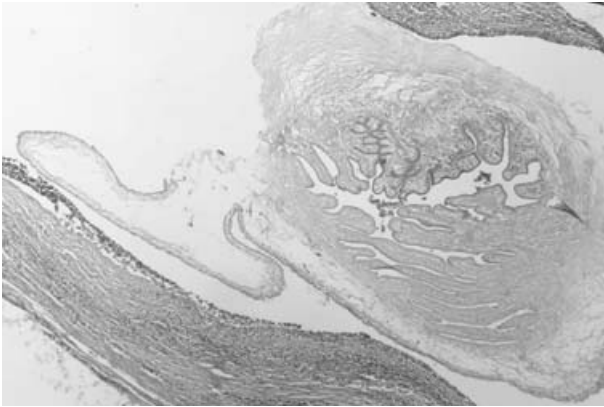


FIG. 2  
Cyst wall with *Taenia solium* larva (H&E; ×20).

established solely by biopsy and examination of the interior of the calcified tumour, where the parasite will be found.<sup>5</sup>

- **Cysticercosis is caused by infestation with the pork tapeworm *Taenia solium***
- **Commonly involved sites are the brain, muscles and subcutaneous tissues**
- **This paper describes a case of cysticercosis presenting as a midline nasal mass mimicking a dermoid**

Praziquantel is the treatment of choice in cases of intestinal and central nervous system involvement.<sup>6</sup> However, it

has no effect on calcified parasites, which need to be surgically removed.<sup>5</sup>

In our patient, the lesion was found to be localised, and complete excision of the sac was performed.

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Dr G Kuruville takes responsibility for the integrity of the content of the paper.  
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