

## Intraorbital paragonimus infection

A 5-year-old girl presented to a local hospital with vomiting. She was suspected of parasitic infection for multiple intracranial lesions and received experimental praziquantel treatment (no steroids therapy). The patient presented with progressive periorbital swelling and proptosis at 2 days after anthelmintic therapy and subsequently transferred to our institution for further therapy. Chest radiograph is negative. A head MRI clearly showed multiple migration tracks in the orbital and brain tissues, which were referred to as “tunnel signs” [Fig. 1a] that had diagnostic value in paragonimiasis.<sup>[1]</sup> The patient had an increased blood eosinophil count and a positive serologic test for *Paragonimus*-specific antibodies. The patient underwent an intraorbital lesion excision by lateral orbitotomy. Pathology studies showed eggs characteristic of *Paragonimus*<sup>[2]</sup> and confirmed the diagnosis of paragonimiasis [Fig. 1b]. This patient subsequently received a combination therapy of praziquantel and methylprednisolone. Clinical follow-up showed no functional deficits.

*Paragonimus westermani* or *Paragonimus skrjabini*, also called lung fluke, is an important water-borne zoonosis and presents an increasing trend in recent years. Cerebral paragonimiasis usually has the typical radiological characteristics on MRI.<sup>[1]</sup> Ocular paragonimiasis had not been reported since 1984.<sup>[3]</sup> Orbital paragonimiasis also has the typical “tunnel signs” but contemporary ophthalmologists are not familiar with these imaging findings. The typical clinical and radiological features of orbital paragonimiasis need to be better promoted and popularized among radiologists and ophthalmologists. Adding hormones in the early stage of praziquantel treatment helps suppress inflammatory response and prevent convex eyes as well as reduces unnecessary surgery.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have

given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

### Conflicts of interest

There are no conflicts of interest.

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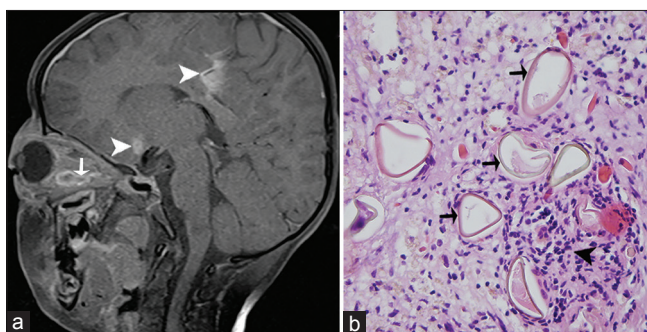
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**Figure 1:** “Tunnel signs” and pathological examination. (a) Sagittal T1-weighted image showing multiple migration tracks in orbital (arrow) and brain tissues (arrowheads). (b) Pathology showing eggs characteristic of *Paragonimus* (H and E, original magnification  $\times 40$ , arrows) surrounded and distorted by inflammatory granulation (arrowhead)

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