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Case Report

Atypical Fascioliasis; Retreatment Considerations and Feasibility of Structured Remote Follow-Up: A Case Report

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Abstract

This case report describes an atypical presentation of fascioliasis in a left-behind child from Yunnan, China in April 2025. The case highlights the combination of atypical hepatic imaging findings, persistent post-treatment eosinophilia, and structured remote follow-up in a single pediatric patient. The child presented with intermittent right-upper-quadrant pain. Abdominal computed tomography revealed multiple patchy low-density lesions in the right hepatic lobe without the characteristic "tunnel sign" but with biliary dilation, a pattern consistent with chronic-stage pediatric fascioliasis reported previously. A clear history of drinking untreated stream water and consuming uncooked wild vegetables was documented. Laboratory tests showed marked eosinophilia (33%), and the diagnosis was confirmed by stool examination and serology. After standard initial treatment with triclabendazole, symptoms persisted with an eosinophil count of 17%. Based on the combination of persistent symptoms and sustained eosinophilia, a decision for retreatment was made. An eosinophil proportion >10% was used as a clinical reference in this case, but this is only a preliminary observation and not a validated criterion. Retreatment was administered, and the patient was monitored through a structured telephone follow-up schedule. Following retreatment, symptoms resolved rapidly, eosinophil levels normalized, imaging lesions resolved by 3 months, and clinical cure was achieved by 6 months. This report illustrates the diagnostic and therapeutic challenges of atypical pediatric fascioliasis and provides preliminary, case-based observations on the possible role of eosinophil-guided retreatment and remote follow-up. These findings should be interpreted cautiously and are not intended to establish a standardized management strategy.

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Introduction

Fascioliasis is endemic in Yunnan, China (1) and parts of Iran (2). Left-behind children are highly vulnerable and often present with atypical features that delay diagnosis. However, the interpretation of persistent post-treatment eosinophilia in children and the role of structured remote follow-up in mobile populations remain unclear. Although each of these components has been described separately, their co-occurrence in a single pediatric patient from a rural endemic area represents the main educational contribution of this case.

To help address this gap, we present a case of atypical fascioliasis in a left-behind child from Yunnan, aiming to provide a preliminary case-based reference for clinicians in endemic regions. This case report was prepared in accordance with the CARE case report guidelines.

Case Report

A 7-year-old left-behind girl from Wenshan, Yunnan, presented in April 2025 with a 6-month history of intermittent right-upper-quadrant pain.

Two months before symptom onset, she had consumed untreated stream water and uncooked wild vegetables in a rural grazing area. Physical examination revealed mild right-upper-quadrant tenderness without hepatosplenomegaly.

Initial evaluation showed marked eosinophilia (33%). Contrast-enhanced CT showed multiple low-density lesions in the right hepatic lobe with biliary dilation and gallbladder wall thickening suggestive of cholecystitis (Fig. 1). These nonspecific imaging findings made liver abscess or malignancy unlikely because there was no typical rim enhancement or dominant enhancing solid mass, consistent with previous descriptions of hepatobiliary fascioliasis (3).

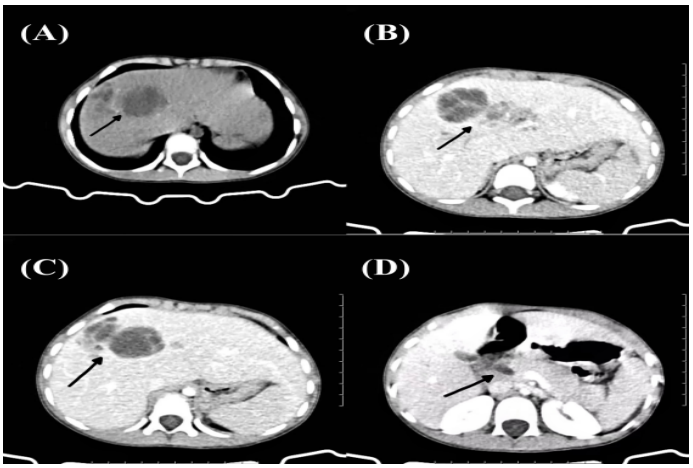


Fig. 1: Abdominal CT findings in a pediatric patient with hepatic fascioliasis. (A) Axial non-contrast CT image shows multiple patchy hypoattenuating lesions in the right hepatic lobe, the largest measuring approximately 5.0 × 3.3 × 4.9 cm, with ill-defined borders (arrow). (B, C) Axial contrast-enhanced CT images in the portal venous phase show no significant enhancement of these lesions, which remain hypoattenuating (arrows); note the absence of the characteristic "tunnel sign." (D) Axial contrast-enhanced CT image shows mild intrahepatic biliary-duct dilatation (arrow), with a maximum diameter of approximately 0.9 cm

Serology was positive for *Fasciola* IgG antibodies. Liver function tests were normal at admission. Stool examination via the modified Kato–Katz technique over three consecutive days revealed eggs morphologically consistent with *Fasciola* spp. (Fig. 2).

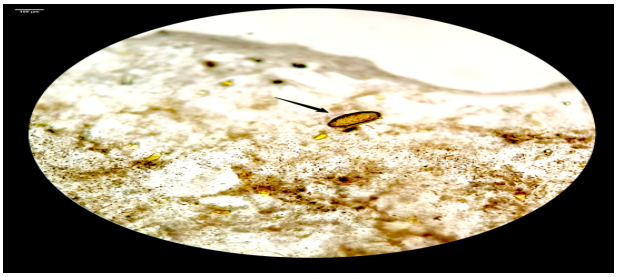


Fig. 2: Microscopic examination of a modified Kato-Katz thick smear (×400) showing an egg morphologically consistent with *Fasciola* spp. (arrow). The egg is oval with a thin shell. Scale bar = 100 µm

After excluding differential diagnoses such as hepatic cystic echinococcosis (4), chronic fascioliasis was diagnosed. In May 2025, she received standard triclabendazole (10 mg/kg/dose, twice daily for one day) (5,6).

A structured telephone follow-up approach was implemented, adapted from mHealth strategies reported for other diseases (7). The protocol included follow-up records, assessments at 1, 3, and 6 months, and guardian-assisted tests at local hospitals. This strategy-maintained care continuity, although its effectiveness was not formally evaluated. Telephone-based follow-up was chosen because of limited internet access in this rural mountainous region.

At the 1-month follow-up, the patient reported persistent abdominal pain with an eosinophil count of 17%. Ultrasound showed partial lesion resolution. Retreatment with triclabendazole was administered based on persistent symptoms, sustained eosinophilia, and incomplete imaging improvement. An eosinophil proportion >10% was used only as a preliminary clinical reference and not a validated management criterion.

The patient recovered rapidly after retreatment. Symptoms resolved completely, and eosinophils normalized (4%) within one month. Three-month imaging confirmed complete lesion resolution and normalized biliary dilation. All laboratory parameters were normal at the 6-month follow-up, consistent with clinical cure. The clinical course is summarized in Table 1.

Table 1: Clinical timeline, treatment interventions, imaging findings, and outcomes in a pediatric patient with fascioliasis

Time Point	Eosinophil Proportion (%)	Clinical Symptoms	Treatment Intervention	Imaging Findings	Clinical Outcome
Initial visit (pre-treatment)	33	Intermittent dull pain in the right-upper-quadrant	None	Multiple patchy hypoattenuating lesions in the right hepatic lobe	—
1-month after initial treatment	17	Residual abdominal pain	First course of triclabendazole	Partial lesion resolution on ultrasound	Incomplete clinical/radiological response
1-month after retreatment	4	Abdominal pain resolved	Second course of triclabendazole	—	Improving
3-months after retreatment	Normalized*	No symptoms	—	Complete lesion resolution on CT; normalized biliary dilatation	Clinical cure
6-months after retreatment	Normalized*	No symptoms	—	—	Clinical cure

*Eosinophil levels normalized after retreatment; specific values at 3 and 6 months were not separately recorded. All scheduled follow-up visits in this individual case were completed

Discussion

The CT findings (no tunnel sign, biliary dilation) align with reported pediatric cases (8). Similar atypical presentations have been described in preschool children (9). These non-classical imaging features may contribute to diagnostic delays and require differentiation from conditions such as bacterial liver abscess (3). Combining epidemiological history, serology, and stool examination may improve diagnosis and exclude other diseases such as echinococcosis (4,10). Because molecular confirmation was not performed, the infection was reported as *Fasciola* spp., which is sufficient for clinical management but limits species-level epidemiological interpretation.

Because standardized pediatric retreatment recommendations are lacking, management often relies on experience from endemic regions. A meta-analysis from Iran described the epidemiological baseline of the disease but did not define pediatric retreatment guidance (11). In this case, an eosinophil proportion >10% was used only as a clinical reference, not as a validated criterion. Eosinophilia may decline after treatment but persist for weeks to months after parasite clearance in both adults and children (12,13). For example, in an adult case, eosinophil counts decreased from 15,120/μL to 2,541/μL shortly after treatment but took up to six months to return to normal (13); in a pediatric case, eosinophilia resolved by the third month (12). This pattern suggests that post-treatment eosinophilia may reflect delayed immune resolution rather than ongoing infection alone. Accordingly, persistent eosinophilia in isolation cannot be regarded as definitive evidence of treatment failure. In our case, the decision to retreat was reached based on the combined presence of persistent abdominal symptoms, sustained eosinophilia, and incomplete radiological resolution, rather than eosinophil percentage alone. While watchful waiting would have constituted a valid alternative management option, retreatment was administered given the persistence of abdominal pain together with unresolved hepatic lesions on imaging. In a recent Egyptian study, 20.3% of patients required a second or third triclabendazole dose (14). Although pediatric-specific data are limited, the present case suggests repeat dosing may be justified when abnormalities persist. While triclabendazole has a favorable safety profile in children (5), monitoring of liver function remains prudent. Metronidazole may be considered in selected patients (15); however, it has shown limited efficacy in human fascioliasis and has not been further investigated as a first-line option (5). Therefore, triclabendazole remains the recommended first-line treatment (5,6).

Systematic follow-up is important, particularly in resource-limited endemic areas. Remote follow-up was implemented because many patients in endemic areas such as Yunnan live in rural or mountainous regions with limited access to repeated hospital visits (1). Guardians completed required tests at local county hospitals, potentially reducing costs, although this was not formally evaluated. All scheduled follow-up visits were completed, suggesting feasibility. However, its impact on long-term adherence and loss to follow-up remains unclear. Adapted from mHealth strategies for other diseases such as malaria (7), this approach should be considered exploratory rather than a validated fascioliasis-specific intervention.

This single-center case report has inherent limitations. Findings are hypothesis-generating rather than validated clinical evidence. Eosinophil-guided retreatment decisions require multicenter prospective validation. Parasite burden was not quantified via egg counts, and 6-month follow-up, while consistent with clinical cure, cannot fully evaluate long-term recurrence risk.

Conclusion

This case shares preliminary experience on comprehensive retreatment decision-making and structured remote follow-up in a resource-

limited setting. These preliminary observations may help clinicians manage similar pediatric cases in endemic regions.

Ethical Approval and Consent

This study was conducted in accordance with the ethical standards and was approved by the institutional ethics committee (Approval No. DFy20250506001). Written informed consent was obtained from the child's guardian for both participation and publication of this case report.

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Conflict of interest

The authors declare no conflict of interests.

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