

CASE REPORT

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# Abdominal tuberculosis manifested as tuberculosis of the urachal sinus in an adolescent and the role of laparoscopy in the management: a rare case report

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## Abstract

**Background:** Abdominal tuberculosis (TB) is an uncommon affliction in adolescence. It is usually associated with pulmonary tuberculosis. The disease is caused by lymphohaematogenous spread after primary infection in the lung or ingestion of infected sputum and has a typically protean and nonspecific presentation. The occurrence of TB in an urachal remnant is probably from the contiguous spread of an abdominal focus or mesenteric lymph node. Urachal TB is a rare entity, with only two reported cases in the literature. We report here a case of clinically silent pulmonary and abdominal TB that manifested in the infection of an urachal sinus and highlight the role of laparoscopy in its diagnosis and treatment.

**Case presentation:** A 14-year-old boy presented to our institution with peri-umbilical swelling and purulent discharge from his umbilicus for 2 weeks duration. There were no radiological, microbiological or clinical evidences of TB in the initial presentation, though he had close social contact with someone who had TB. A computed tomography scan of the abdomen confirmed the diagnosis of an urachal abscess. An incision and drainage procedure was performed followed by a course of antibiotics. A scheduled laparoscopic approach later showed that the peritoneum and serosal surface of the small and large intestines were studded with nodules of variable sizes, in addition to the urachal sinus. The histology of the resected tissues (urachal sinus and nodules) was consistent of TB infection. He recovered fully after completing 6 months of anti-tuberculous therapy.

**Conclusion:** This report highlights a rare case of TB urachal abscess in an adolescent boy, the difficulties in the diagnosis of abdominal tuberculosis, the need to consider TB as a cause of urachal infection in endemic areas and the use of laparoscopy in both diagnosis and treatment.

**Keywords:** Tuberculosis, Urachal sinus, Urachal abscess, Infection, Laparoscopy

## Background

Tuberculosis (TB) remains a major burden to healthcare in affected countries with an estimate of 9.0 million cases and 1.5 million deaths globally in 2013 [1]. Most cases were in South-East Asia and Western Pacific Regions (56 %), where Malaysia is located [1]. The estimated incidence in Malaysia was 29 thousand cases or 99 cases per 100,000 populations in 2013 [2]. The annual

incidence of new TB cases in Malaysia is increasing since 2005 [2, 3], with a similar finding observed in the paediatric group [3]. Close contact with a person with active TB, social factors and male sex are important risk factors for TB infection in children and adolescents [3, 4]. While pulmonary TB and lymph nodal TB are the commonest presentations in children [3], abdominal TB is an uncommon presentation that complicates pulmonary TB in 1–5 % of cases [5, 6]. Even rarer is the association of TB and the urachus, with only two cases reported in the English language literature [7, 8] (Table 1). We report the case of an adolescent boy with a TB urachal abscess in the setting

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