A Case of Pseudotumorous Form of Ascaris
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ABSTRACT
A 35-year-old woman presented with lower abdominal pain and amenorrhea. CT showed a thick walled lobulated mass with Ascaris adjacent to caecum along with the presence of a left ovarian mass. The peroperative findings were a tubular mass with central tunneling containing an Ascaris lumbricoides. Left ovary showed a haemorrhagic cyst. Biopsy of the mass showed acute on chronic granulomatous inflammation and the worm was found to be female. This was a rare case of Ascaris lumbricoides presenting as a pseudotumorous mass.

Key words: Ascaris. Pseudotumor. Abdomen. Chronic granuloma.

INTRODUCTION
In developing countries, where a great part of the population lives in low hygienic conditions and lack of basic sanitization facilities, there is an increased incidence of parasitosis. Consequently, the complications of these pathologies are more frequent and represent important medical, social and economic problems for these nations. The parasitic worms usually reside in the intestine; however, due to the tendency to migrate, they can move to any part of the human body. Occasionally, they can perforate the intestinal tract and give rise to intense granulomatous inflammatory reaction which mimics tuberculosis.

This report describes the clinical and diagnostic approach of an atypical case of pseudotumorous form of Ascaris.

CASE REPORT
A 35-year-old lady, who had a previous history of passage of worms in the stools, developed on and off dull lower abdominal pain in the right lower part of the abdomen. The pain increased in intensity and became continuous. Later on, she developed amenorrhea. On consultation with the gynaecology department, her laboratory findings were found to be within normal limits. An abdominal ultrasound revealed an abdominal mass, containing Ascaris, probably arising from the uterine wall. The CT scan showed a well-defined lobulated tubular mass with thick enhancing walls adjacent to the caecum (Figure 1). Concomitant ultrasound showed live Ascaris within the mass. An ill-defined complex mass with thin internal septations was also seen in the left adnexal region.

At laparotomy, the findings were a hard tubular abdominal mass adherent to the anterior abdominal wall and adjacent loop of jejunum. Despite adherence to the gut, no communication was noted. The findings were suggestive of a mass. Tuberculosis was also suspected as cheesy material oozed out of the mass while separating it from the gut. The left ovary was found to have a haemorrhagic cyst. The uterus and other ovary were found to be normal. Cut section of the mass revealed a long central tunnel with a live Ascaris lumbricoides (Figure 2 and 3). The biopsy report showed acute on chronic granulomatous inflammation and the worm was found to be female. Postoperative recovery was smooth. The patient was discharged on antihelminthics and followed in the outpatient department.

DISCUSSION
Adult worms usually cause no symptoms related to intestinal tract if there load is low. However, as they can migrate, even a single worm can cause serious complications. The worms may enter into viscera any of the gastrointestinal system or find their way into the peritoneal cavity. Involvement of unexpected sites such as the kidney or even pleural cavity by this parasite can lead to life-threatening complications. Tuberculosis can lead to a similar granulomatous reaction and therefore must be considered in the differential diagnosis.

Usually, intestinal ulcerations provide a passage for this worm to pass into the abdominal cavity. Occasionally, the worm may itself perforate the intestine. Then, the female worm lays eggs which produce an intense granulomatous inflammation, after which the worm dies leading to a large abscess. It can even lead to severe granulomatous peritonitis. This is often fatal since there is secondary bacterial infection. After its death, the worm can go to any place it could visit during life.
However, an absence of inflammatory changes in the visited organ excludes premortem migration. Postsurgery the worms may wander into the peritoneal cavity or come out of the sutures of the wound. Blockage of feeding tubes or unusual ingestion of a Levin's tube by Ascaris lumbricoides has been reported.4-5 Clinically, it can also present as a tumour-like mass anywhere in the abdomen.6,7 In the present case, the adult worm was found inside the inflammatory mass. It probably reached the peritoneal cavity through a perforation in the bowel. Sometimes, as in this report, it is impossible to show the exact point of intestinal perforation. The existence of a fibrinous exudation and adherences among the intestinal loops evolved in the inflammatory process are the factors that make the exact localization of the injured area difficult.1 In this case, the loops of jejunum were adherent to this mass but no communication was noted between this loop and the mass. This probably may be the site from where the worm migrated out of the gut. It may also be assumed that it was a very slow process that led to sealing of the exit pointing by adhesions. As a result, an acute inflammatory mass formed around it. However, in order to escape, the worm kept on forming a tunnel through this mass. The clinical and gross appearance of the lesion resembled a neoplasm. It therefore may be designated as "pseudotumorous form of ascariasis". This also highlights the importance of considering helminthic infection and their atypical manifestations in patients from an endemic region.

REFERENCES

Figure 1: CT scan showing a well-defined lobulated tubular mass adjacent to the caecum.
Figure 2: Cut section of the mass showing a long central tunnel.
Figure 3: Mass with an ascaris lumbricoides coming out of the tunnel.