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MECKEL'S DIVERTICULITIS DUE TO *TAENIA SAGINATA*: CASE REPORT
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MECKEL'S DIVERTICULITIS DUE TO *TAENIA SAGINATA*: CASE REPORT

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SUMMARY

A thirteen-year old girl presented with acute right lower quadrant abdominal pain for which evaluation suggested appendicitis. At laparotomy, the appendix was normal but a Meckel's diverticulum with an impacted *Taenia saginata* (tapeworm) was found. The diverticulum was excised and histopathology confirmed diverticulitis from the parasite. Though Meckel's diverticulitis due to parasites has been reported, this is usually from ascaris. Tapeworm causing this complication is rare.

INTRODUCTION

Meckel's diverticulum is present in about two per cent of the population making it the most prevalent gastrointestinal anomaly(1). Inflammation of the diverticulum could occur *de novo* or due to foreign bodies(2,3). This is a report of an unusual cause of inflammation in a Meckel's diverticulum.

CASE REPORT

A thirteen-year old girl presented with a sharp pain located at the right lower quadrant of the abdomen for six days. She admitted to having had similar pain on two previous occasions within the last two months. The pain was non-radiating. There was no anorexia, nausea or vomiting. Bowel habit was normal. She had no fever or genitourinary symptoms. She attained menarche a month earlier.

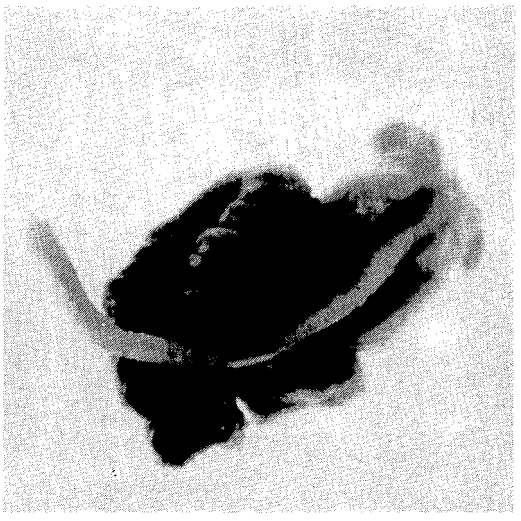
On physical examination, she was apyrexic, not pale or dehydrated. Pulse rate was 100 per minute, regular and full volume and blood pressure was 100/60mmHg. The abdomen was flat and moved with respiration. There was tenderness and rigidity in the right lower quadrant. The rest of the abdomen was soft and non-tender. There were no masses palpable. Rectal examination was normal.

Complete blood count revealed a haemoglobin of 11g/dl, white cell count of 8.7 x 10^9/l with eosinophilia of 14%. The serum urea and electrolytes were within normal limits. An Abdomino-pelvic ultrasound scan did not show any masses or intraperitoneal collection.

She then had a laparotomy through a grid-iron incision under general anaesthesia. The appendix was found to be normal. This necessitated further inspection of the small bowel. A 5cm long Meckel's diverticulum situated 40cm from the ileo-caecal junction and grossly inflamed was found. A wedge resection of the diverticulum was performed. Bowel continuity was established by a two layer anastomosis. Inside the diverticulum were found segments of *Taenia saginata* (tapeworm) (Figure 1). Appendicectomy was also performed.

Figure 1

Resected Meckel's diverticulum with the incarcerated tapeworm



Histopathology of the excised diverticulum showed marked infiltration with eosinophils and lymphocytes. No gastric or pancreatic tissues were seen. The appendix was normal on histopathology.

Stool microscopy done seven days after surgery showed ova of hookworm but no other helminthic ova were seen. The patient was given oral niclosamide 2g as a single dose. She did well and was discharged nine days after surgery. A repeat stool microscopy at three months of follow up did not show any helminthic ova.

DISCUSSION

Meckel's diverticulum is usually symptomless but it is subject to a variety of complications which are more common in children(4). Inflammation of the diverticulum is one of the common complications occurring in 24% of

cases(4). Its clinical features are similar to those of acute appendicitis and the diagnosis is often made at operation. Our patient, like many other cases of Meckel's diverticulitis(2,3,5) was suspected pre-operatively to have acute appendicitis.

Various foreign-bodies including *Ascaris lumbricoides*(2,5), toothpick(3), food residues, fishbone and gallstones(2,5) have been responsible for inflammation or perforation(3) of Meckel's diverticulum. In our environment, tapeworm infestation is common and results from consumption of partially cooked or inadequately roasted beef(6,7). These worms grow in the intestine and could migrate into the appendix, causing inflammation(6). They can also pass into the common bile duct or out through the anus(6,7). Similar migration into a Meckel's divertivulum could cause inflammation as in our patient. In parasite endemic areas like ours, this possibility should be considered when evaluating children with abdominal pain.

REFERENCES

1. Mackey W.C. and Dineen P.A. Fifty year experience with Meckel's diverticulum. *Surg. Gynec. Obstet.* 1983; **156**:56-64.
2. Sreevasthsa M.R., Humberto J. and Jaffer M.A. Meckel's diverticulitis caused by roundworm incarceration. *Paediat. Surg. Int.* 1996; **11**:179.
3. Greenspan L. Abramwitch A., Tomarken J. and Cohen Z. Perforation of a Meckel's diverticulum by a foreign body. *Can. J. Surg.* 1983; **26**:184-185.
4. Soltero M.J. and Bill A.H. The natural history of Meckel's diverticulum and its relation to incidental removal. A study of 202 cases of diseased Meckel's diverticuli found in King County, Washington, over a fifteen year period. *Amer. J. Surg.* 1976; **132**:168-173.
5. Ninawe W.G. Acute obstructive Meckel's diverticulitis due to Ascaris lumbricoides. *Indian J. Surg.* 1985; **47**:235-236.
6. Parry E.H.O.(ed) Tapeworm Infestation (Taeniasis). In: *Principles of Medicine in Africa;* 2nd Ed, 1984, Oxford University Press Oxford pp. 515-518.
7. Manson-Bahr P.E.L., Bell D.R.(eds) Tapeworm(cestodes). *In: Manson's Tropical Diseases,* 19th Edn, 1987; Bailliere-Tindall, London pp 521-557.