

Incidental Enterolithiasis in Humans: A Case Series with Review of Literature.

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ABSTRACT

Enterolithiasis, or presence of stone concretions in the gastrointestinal tract, is an important but relatively uncommon clinical condition. It is most commonly found in animals especially equines. In humans clinical presentation of this condition is varied and sometimes masquerading other intra abdominal pathologies. Clinically insignificant incidentally noted enteroliths may shift attention from primary non-enterolith related pathology of the patient that may be responsible for a current clinical presentation. Here we are reporting four cases of incidentally detected enterolithiasis at our hospital with review of literature.

Keywords: Enterolithiasis, Intestinal Calcification, Constriction, Diverticulum, Ileus.

INTRODUCTION

Enterolithiasis, or presence of stone concretions in the gastrointestinal tract, is an important but relatively uncommon clinical condition. It is most commonly found in animals especially equines. In humans clinical presentation of this condition is varied and sometimes masquerading other intra abdominal pathologies. Clinically insignificant incidentally noted enteroliths may shift attention from primary non-enterolith related pathology of the patient that may be responsible for a current clinical presentation. Here we are reporting four cases of incidentally detected enterolithiasis at our hospital with review of literature.

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CASE SERIES

CASE 1:

A 20 years young female presented to the emergency department following a road traffic accident, during the routine screening, the erect abdominal x-ray demonstrated extensive radio opaque concretions probably enterolithiasis [Figure 1]. The patient had no previous history suggestive of any intra abdominal pathology, as it was a minor trauma she was discharged the following day explaining the risks associated with this incidentally

detected condition. She was not willing for any intervention as she was symptomless now we have her on regular follow up.



Figure 1: Extensive radio opaque concretions in the colon and rectosigmoid.

CASE 2:

A 55 year female presented with chronic low backache of radiating type to the left ipsilateral hip and posterior aspect of leg with occasional paresthasias and numbness. On evaluation of the patient x-ray of the anterior lumbosacral spine showed multiple lamellated radio-opaque shadows, which were clinically silent, as patient symptoms could not be referred to any bowel pathology [Figure 2].



Figure 2: Multiple lamellated radio opaque shadows.

CASE 3:

A 36 year old male labourer presented in the emergency department with acute onset of epigastric pain radiating to back since one day, based on clinical examination and biochemical work up a diagnosis of acute pancreatitis was made. During our routine work up for acute abdominal pain erect x-ray abdomen showed numerous faceted spherical radio opaque opacities probably in the right colon and two such opacities were noted in the pelvis suggestive of an enterolithiasis. We could not attribute his symptoms to enterolithiasis as it was a case of acute pancreatitis and managed conservatively. He was followed up over time with no new history of any abdominal pain or other gastrointestinal symptoms.

CASE 4:

A 30 years young male with a history of fall from height at workplace underwent screening x-ray to rule out vertebral injuries, which showed multiple radio opaque densities of differing sizes with central radiolucency in the pelvis. This may either be in the bladder or intestine. The patient had no history suggestive of urinary symptoms or any other bowel related pathology.

DISCUSSION

Enterolithiasis was first described by a French physician Chomelin J in 1710 in the medical series of *Historie de l' Academie Royal*.^[1] It occurs as a result of intestinal stasis and has been found in association with congenital or acquired diverticula of the small bowel, tuberculous, neoplastic or Crohn's strictures and in blind loops. Enterolithiasis has been divided into primary and secondary based on the primary site of formation of the stones.^[2] Primary enteroliths may be subdivided into a false (which are

inspissated intestinal contents) and true.^[3] Enterolithiasis of meckel's diverticulosis shows a 3:1 male to female ratio, at least partially due to the 2:1 male to female ratio classically seen in this condition.^[4] In contrast, enterolithiasis associated with intestinal tuberculosis and gallstone ileus have shown a female preponderance, likely due to the greater incidence of these diseases in females.^[5,6] Patients should be evaluated with a detailed history and physical examination to rule out other common pathologic diseases before the diagnosis of enterolithiasis is made. Historically diagnosis of enterolithiasis is made at the time of laparotomy or autopsy, but with the advent of radiology and a tremendous number of routine radiological investigations, enterolithiasis is diagnosed preoperatively but a definite diagnosis of enterolithiasis requires biochemical analysis of the stones or concretions to know the constituent.^[7] Impacted enterolith may incite direct pressure injury to the intestinal mucosa, potentially worsened by chemical damage from the reactive substances found on its shell.^[8] Optimal treatment of enterolithiasis should focus on enterolith removal and correction of underlying pathology to prevent future formation of additional enteroliths. In cases of acute intestinal obstruction, expectant management with serial abdominal examinations, electrolyte correction, appropriate hydration, and nasogastric tube suctioning may be selectively considered for stones less than 2 cm in size in the absence of underlying luminal compromise. It is generally accepted that, in the absence of mechanical or structural luminal compromise, stones larger than 2.5 cm in diameter may cause an intestinal obstruction hence needs surgical intervention. Laparoscopic assisted surgery or diagnostic laparoscopy is said to be useful in these situations.^[9] Mortality of uncomplicated primary enterolithiasis is very low, but may rise to 3% in the poorly conditioned patients with significant obstruction and delay in diagnosis.^[10]

CONCLUSION

Enterolithiasis still remains an important uncommon diagnosis but with the rising radiological investigations the incidence of incidental enterolithiasis is becoming more and more common. Biochemical analysis of the extracted stone together with micro environmental factors required for the stone formation needs to be studied in order to prevent them from recurring. Management of asymptomatic incidental enterolithiasis needs to be charted out to compare the outcomes following treatment and timing of the definitive intervention will be crucial in the outcome.

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