ENTEROLITHS

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Abstract

A case is presented in which an ENTEROLITH was found to be impacted in a Meckel's Diverticulum. Many complications of Meckel's Diverticulum have been reported and described. However, a case in which Meckel's Diverticulum was found to be the site of an Enterolith formation has not yet been reported in medical literature. The majority of enteroliths are composed of bile salts, calcium, carbonates, or phosphates. This particular case has acquired its special importance in that the enterolith is formed of calcium oxalate.

Case History

A 42 years old man presented himself with a constant dull pain in the left lumbar region for the last one and a half months. There was no radiation, no vomiting and he did not show any urinary symptoms. He was treated by his doctor with some antibiotics and anti-spasmotic drugs. After seven days the pain transferred itself to the right lumbar region but retained its characteristics. After four days the pain again returned to the left renal angle where it had been at the time of examination on admission. The patient's digestion and bowels had always been normal and he made no complaint concerning any other trouble or illness in the past. On further close questioning the patient said that he had never had any pain in the central region of his abdomen in the past.

On examination he was a well built person looking younger than his years. On rectal examination some tenderness was noted on the left side.

Investigations

Hb 70%, total leucocytic count was 9500 with neutrophils 73%, lymphocytes 24% and eosinophils 3%. There was no abnormality in urine except 2-3 pus cells per high field. Culture of the urine was not done.

Plain X-ray of the abdomen (Fig. 1)

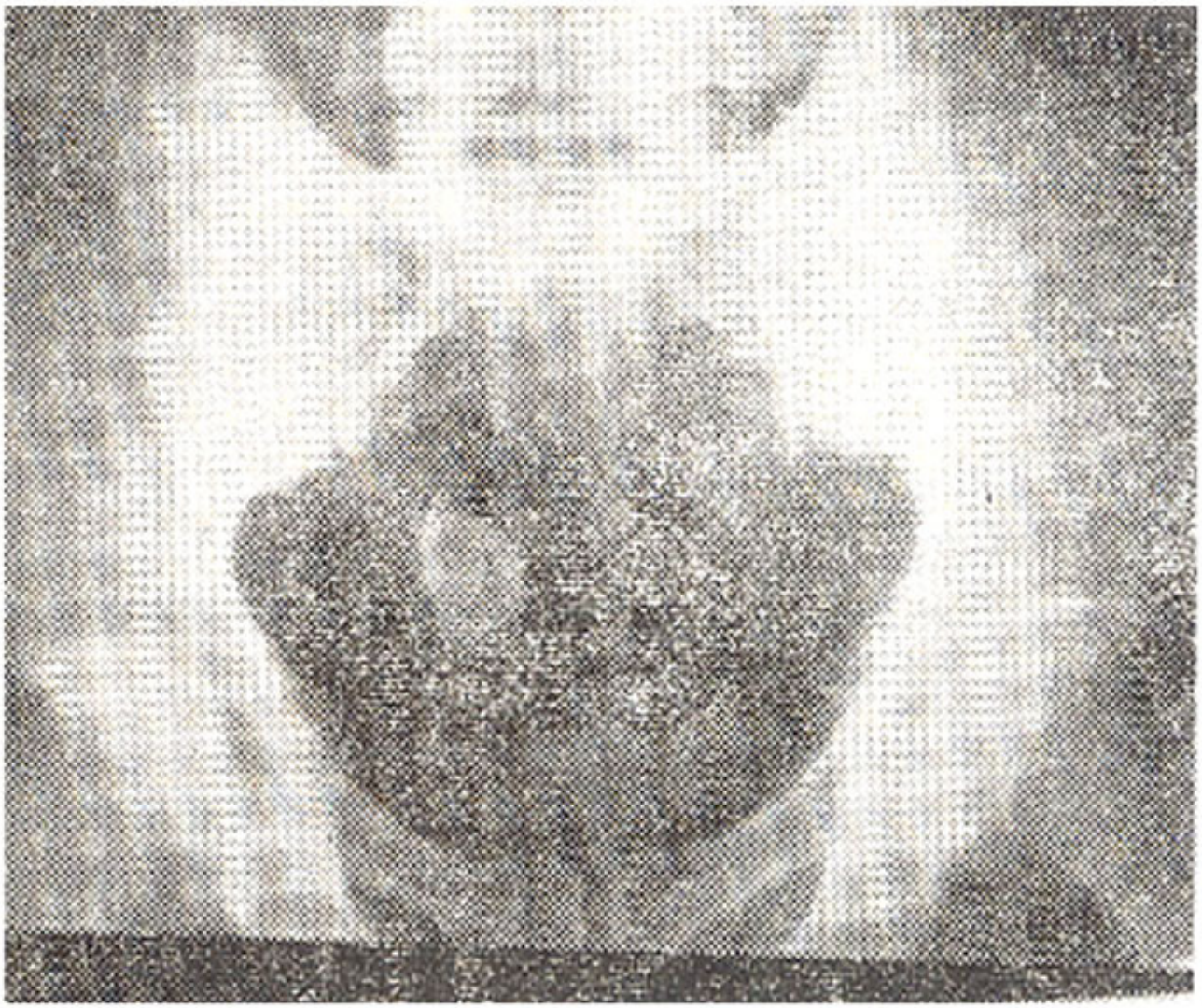

Fig. 1. Plain X-ray abdomen. A radio-opaque shadow in front of the fourth sacral vertebrae.

showed a radio-opaque shadow in the pelvis in front of the fourth sacral vertebra both kidneys, ureters and bladder were within normal limits on IVP (Fig. 2)

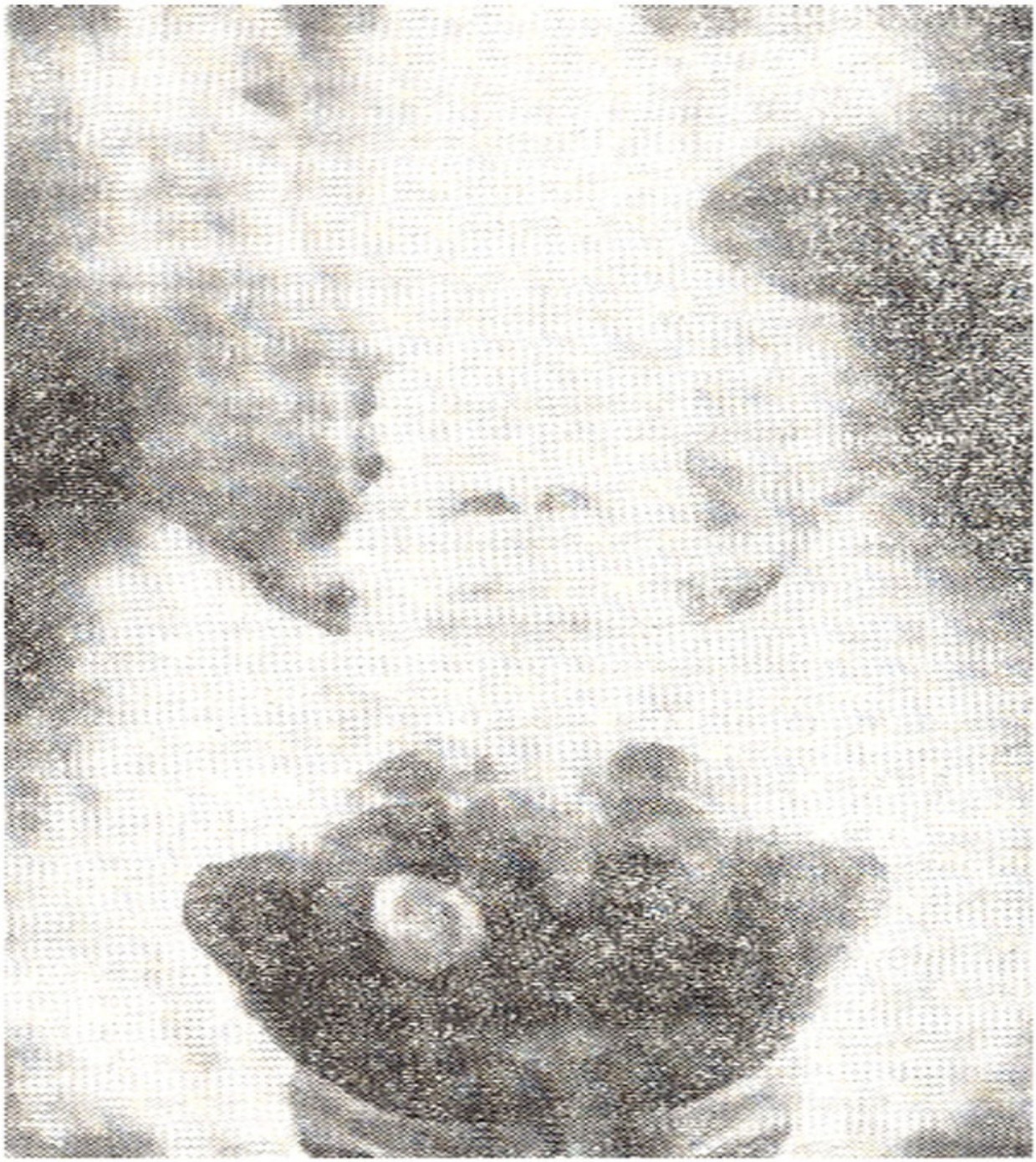

Fig. 2. Intravenous pyelogram. Both kidneys are secreting normally, ureters and bladder are within normal limits. The radio-opaque shadow is outside the urinary tract.

and the opacity was lying outside the urinary tract (Fig. 3).

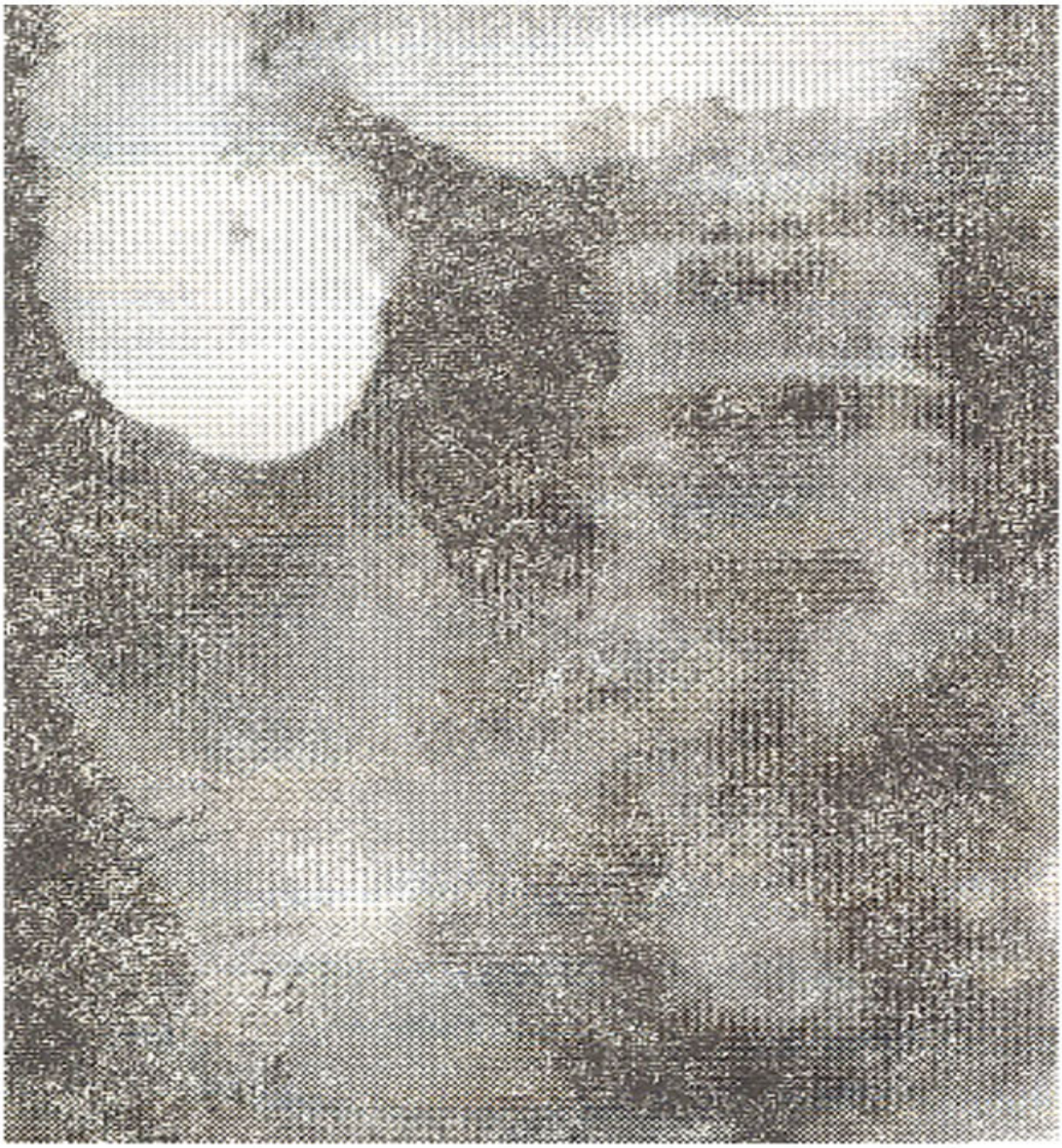

Fig. 3. Barium meal follow through six hours after swallow. There is a collection of Barium in a pouch around the opacity in the line of the terminal ilium.

There was a collection of barium in an isolated pouch around the concretion in relation with the ilium on Barium meal study.

Laparotomy was undertaken on 6-8-1976. There was an inflamed Meckel's diverticulum stuck in the rectovesical pouch touching the lower end of the left ureter.

Gall bladder, small intestine and iliocaecal junction were normal. A diverticulectomy was done. The patient made an uneventful recovery and is completely symptom free at the time of reporting. The histology examination was not undertaken.

The stone was oval, grey in colour and measuring 20 x 15 x 10 mm. It weighed 45 gms and had a vegetable peel in the centre. A chemical examination was arranged in the Department of Biochemistry, Punjab Medical College, Faisala-bad, and also at the Chemical Laboratory, National Fertilizer Corporation, Faisalabad.

The following is the report of the chemical analysis:-

Phosphate 0.78%
Oxalates 47.01%
Acid insoluble (silica) 0.21%

Discussion

Meckel's diverticulum is an embryological remnant of the vitellointestinal duct present in 2% of population 3-5 cms long situated about 100 cms from the iliocaecal junction at the antemesenteric border of the ilium (Brash, 1937) 15-35% give symptoms and undergo pathological changes (Castleden, 1970) (Table I).

Table I: Complications of Meckel's Diverticulum

No.	*Cause*	*Complications*
1.	Ectopic tissues	Bleeding and perforation.
2.	Mechanical alterations	Volvulus and intersusception
3.	Littres hernia	Incarceration
4.	Inflammation	Diverticulitis
5.	Umblical	Polyp and fistula
6.	Neoplastic	Tumours
7.	Narrow base	Foreign bodies

Lately Soltero and Bill (1976) claimed these pathological changes occur in the Meckel's diverticulum in 4%. McKay (1973) reported a case of Meckel's diverticulum which presented as a fistula in ano. Persson (1939) and Moore 1976 reported different types of exogenous foreign bodies present in the Meckel diverticulum, mostly causing perforation; more than half of these foreign bodies were fishbones (Persson, 1939). Robins presented a case of Meckel's diverticulum with gallstones in it, in the forty-seventh Annual Meeting of the Pacific Coast Surgical Association, Monetey, California, Feb. 15-18, 1976. But, as far as we know, no one has reported a case of Meckel's diverticulum with an

enterolit in it

The Enterolith itself is an uncommon endogenous foreign body in the gastrointestinal tract. It is usually made up of bile salts on a nidus of gallstones or a clump of bacteria. Duodenal diverticuli are also contributing factors due to their altered bacterial activity and low P.H. Less common are the mineral salts of calcium, but a few cases of Magnesium and Barium have also been described. Carbonates and phosphates are the usual anions but enteroliths composed of casein and oxalates have also been reported (Singleton, 1970). They are usually formed on a nidus of vegetable peels or fruit seeds due to stasis caused by a stricture which can occur in Crohn's disease or tuberculosis (Rathore, 1978). In our case the gallbladder was normal and there was no abnormal narrowing of the gut which could have allowed stasis to form an intestinal stone. So it is speculated that Meckel's diverticulum is the primary site of the enterolith formation on a core of vegetable peels. By virtue of its constant irritation it caused a chronic inflamation of the diverticulum which brought about adhesions in the pelvic peritonium.

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