Proceedings S.Z.P.G.M.I vol: 14(1) 2000, pp. 39-40.

Jejunal-intussusception Secondary to Leiomyoma Diagnosed on Ultrasonography

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SUMMARY

A case of jejunal-intussusception is presented in which a leiomyoma acted as a lead point. The diagnosis was made on ultrasonography and appearance are described.

CASE REPORT

A 50 year old man presented at the emergency department with short history of epigastric pain associated with vomiting and constipation. On examination he was locally tender over epigastrium and provisional diagnosis of acute pancreatitis was made. Initial hematological and biochemical investigations were non-revealing. Abdominal x-ray showed double bubble sign and paucity of gas in the small bowel and the colon, indicating proximal obstruction. Ultrasonography on admission showed dilated stomach and a gut related mass in left hypochondrium giving a doughnut appearance (target sign) on transverse sections and pseudo-kidney sign on longitudinal sections, features reflecting intussusception (Fig. 1). Upper GI endoscopy confirmed the sonographic finding of gastric dilatation and 2.5 L of bile-stained fluid was aspirated with additional finding of extrinsic compression on the body of stomach. Antegrade barium study showed significant dilatation of stomach and duodenum and marked narrowing of proximal jejunum distal to DJ flexure, demonstrating a central channel with significant obstruction to the transit of contrast (Fig. 2). In keeping with ultrasound findings, a diagnosis of intussusception of jejunum was made. At laparotomy intussusception of jejunum was found with 3.5 cm pedunculated polypoidal mass at its apex. The involved segment of jejunum with mass was resected, followed by end to end anastomosis. Histopathological examination showed leiomyomatous polyp leading to intussusception.

DISCUSSION

Intussusception in adults is almost invariably caused by a tumor of the small or large bowel which may be benign or malignant. Symptoms may be sudden and severe or chronic with recurrent episodes of colicky abdominal pain. Clinical diagnosis of intussusception may be difficult and delay in diagnosis has the danger of potential bowel gangrene[1]. Leiomyomas are the most common benign small bowel tumors with jejunal predilections[2]. Intestinal obstruction may be produced by encroachment on the lumen or by intussusception with the tumor acting as lead point[3].

Abdominal x-ray may help in the diagnosis of intussussception and antegrade barium study may show coil spring appearance or abrupt narrowing of barium column demonstrating a central channel[4]. There is no doubt that ultrasound played a significant role in the diagnosis of intussusception along with antegrade barium study in our case. Ultrasound has been reported to achieve high sensitivity and specificity in the diagnosis of intussusception in range of 88% to 100% (Bhisitkul and others and Verschelden and coworkers). Classical sonographic features described in intussusception are the donut sign on transverse sections and pseudo-kidney sign on longitudinal sections. The doughnut/pseudo-kidney sign shows an outer hyporeflective layer representing the intussuscipiens and returning limb of intussusceptum, the center is usually hyper-reflective representing the intussusceptum and the accompanying mesentery[5].

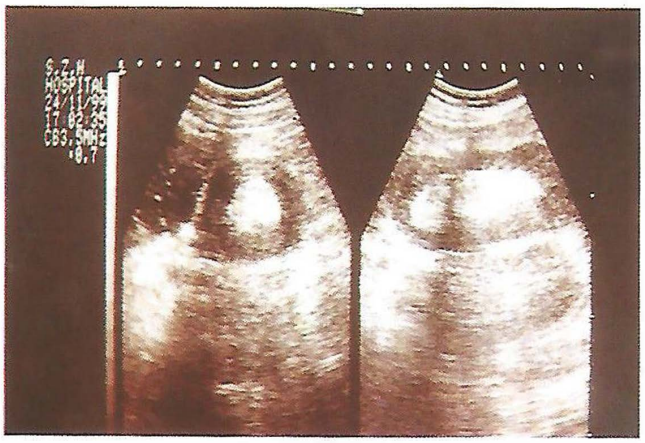

Fig. 1: Transverse and longitudinal sonographic examination demonstrating the donut and pseudo-kidney sign of intussusception.

Fig. 2: Upper GI contrast study showing dilated stomach and duodenum with marked and abrupt narrowing of the proximal jejunum close to DJ flexure demonstrating a central channel.

Ultrasonography is a reliable diagnostic modality in the evaluation of suspected intussusception[6]. Easy availability, cost-effectiveness and non-invasiveness make ultrasound an invaluable diagnostic tool.

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