An Unique Radiographic Finding In A Perforated Duodenal Ulcer Review Of Peptic Ulcer Disease In Children

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Peptic Ulcer disease is no more uncommon in children. We are presenting a case of Duodenal perforation in a ten years old child who previously had no complaint. Radiograph abdomen showed absent stomach shadow (an unique observation). Repair with omental patch ended uneventfully.

Key Words: Duodenal ulcer, Perforated, Primary ulcer, Radiograph, Omental path, Falciform Ligament, Ancillary procedures.

Incidence of peptic ulceration and it's complications is variable in various studies, it is generally accepted as common among children. We have observed that peptic ulceration and haemorrhage is frequent in our children but complications like perforations and obstruction are very uncommon.

Case Report

A ten years old male child was brought in emergency with distension abdomen, vomiting and constipation. There was no previous history suggestive of peptic ulcer disease or steroid intake. Child was well built, moderately dehydrated and had distended abdomen with generalised tenderness. Baseline investigations and electrolytes were normal. Radiograph abdomen in addition to free gas under diaphragm showed a unique feature, i.e.; absence of stomach gas shadow.

After initial management Laparotomy was performed. Right upper transverse incision was planned for unknown perforation which was extended in midline towards xiphisternum viz.

A moderate perforation with thin, ragged margins was present in first part of duodenum. Perforation was stitched transversally with omental patch. No auxiliary procedure was performed. Child recovered uneventfully.

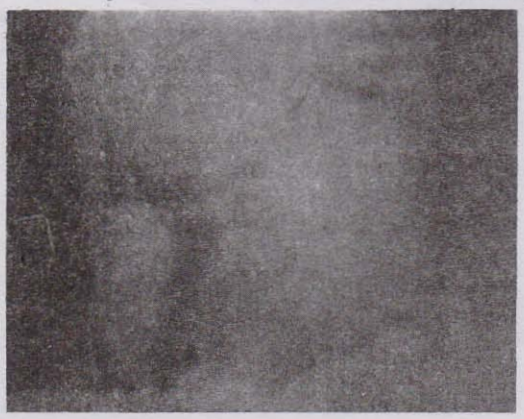

Figure No. 01 Radiograph abdomen in erect posture showing free gas under diaphragm and unique finding, absence of gastric air shadow.

Discussion

Peptic ulcerations was classified by Schuster and Gross in 1963 as Primary and Secondary. In children single most common type is Primary ulceration. This occurs in first 10 days of life due to extra number of parietal cells, incidence increases after six years of age till teen-age. Ulcers are deep, single, in Prepyloric region and duodenum. Peptic ulceration is thought to occur due to mucosal injury caused by increased pepsin and hyperacidity. 50% children have strong family history of such ulceration[1].

Secondary ulceration is stress induced or drugs induced. Stress induced Cushing's ulcers caused by trauma and those by head injuries are like primary ulcers. Stress induced Curling's ulcers are ischaemic, multiple, fundic ulcers. Steroids are commonly misused and incidence of steroid induced ulceration is next to primary ulceration. Non steroidal anti-inflammatory drugs in addition to Aspirin also causes ulceration and its complications[2].

Complications are common in symptomatic ulcers but incidence has declined since introduction of H-2 receptor blockers and awareness of disease in children [3].

G.D Duremdes (1970)[4] has described high incidence of recurrence of ulceration after treatment and J.W Harmon (1981)[5] advocated use of ancillary procedures after repair like truncal vagotomy and pyloroplasty or preferably highly selective vagotomy/parietal calls vagotomy. Laparoscopic repair of perforated duodenal ulcer has been performed but M-Miserez (1996)[6] has observed that post operative complications and hospital stay is the same as after Laparotomy. Perforated ulcers have high morbidity (71%), procedure related complications are faced in 17% operations (MC-Barry 1996)[7]. WS-Munro (1996)[8] has laparoscopically sutured Falciform ligament over perforated duodenal ulcers rather than omental patch and found it easier to perform and it also cuts down hospital stay.

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