

**LIGAMENTUM TERES SIGN - PNEUMOPERITONEUM; CASE REPORT.****Ligamentum teres belirtisi - Pnömooperitoneum; Olgu sunumu.****Arkaprovo Roy<sup>1</sup>, Ramanuj Mukherjee<sup>2</sup>, Bipradas Roy<sup>2</sup>**Calcutta National Medical College, Department of Surgery<sup>1</sup> and R.G. Kar Medical College, Department of Surgery<sup>2</sup> Calcutta / India**Cer San D (J Surg Arts), 2012;5(1): 9-11.****ABSTRACT**

Pneumoperitoneum is a common radiological sign observed in surgical practice. The commoner causes include hollow viscus perforation. The present article is a reminder of The Falciform / Ligamentum teres sign as is appreciated on plain X Ray and CT scan seen in a 21 year old college student

**Key words:** Pneumoperitoneum, CT Scan, X-Ray, Ligamentum teres sign.**ÖZET**

Cerrahi pratiğinde pnömooperitoneum çok sık karşılaşılan bir bulgudur. İçi boş organ delinmeleri ise en sık karşılaşılan sebebidir. Burada, 21 yaşındaki bir kolej öğrencisinde çekilen direkt karın filmi ve bilgisayarlı tomografide Ligamentum teres (falsiform) belirtisinin görülmesi sebebiyle konu gözden geçirilmiştir.

**Anahtar kelimeler:** Pnömooperiton, BT, Direkt film, Ligamentum teres belirtisi.**INTRODUCTION**

Pneumoperitoneum is a common radiological sign observed in surgical practice. The commoner causes include hollow viscus perforation, post surgery / laparoscopy, tubal insufflation to rarer disorders of spontaneously gas forming organisms causing peritoneal free gas. Various radiological signs have been ascertained for describing.

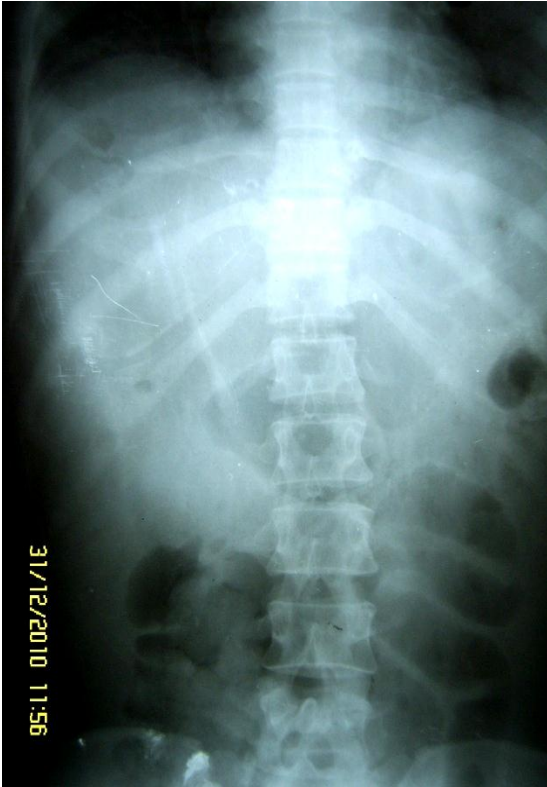
Pneumoperitoneum on basis of the various anatomical structures delineated or resemblance of common objects (eg; football sign). The present article is a reminder of the falciform / ligamentum teres sign as is appreciated on plain X-Ray and CT scan.

diagnosis of acute pancreatitis. The initial blood counts including TLC, amylase, lipase suggested a differential diagnosis of other ominous disease conditions. A plain X-ray was done which failed to show the conventional cresenteric free gas under diaphragm but showed the falciform ligament sign being visible as a linear density lying obliquely (Figure 1). On further query a lateral decubitus view and a CT scan abdomen the falciform ligament sign is clearly visible being outlined by free intraperitoneal gas. The patient underwent a laparotomy and ruptured jejunal diverticulum with a small "sealed" perforation was found (Figure 2). The CT scan did not reveal the jejunal diverticula.

**Case**

A 21 year old college student was admitted with clinical signs of Acute abdomen with provisional

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**Figure 1:** Plain X-Ray showed the falciform ligament sign being visible as a linear density lying obliquely.



**Figure 2:** CT scan showed the Falciform ligament sign is clearly visible being outlined by free intraperitoneal gas.

### DISCUSSION

The ligamentum teres represents the primitive left umbilical vein (“the left vein is left”) joining the left branch of the portal vein. The falciform ligament is a double layer of peritoneum that forms anteriorly near the midline between the umbilicus and the esophagus. It passes backward and splits to enclose the liver.

Conventional and cross sectional imaging has opened up a vast arena of new findings in hitherto unknown “pneumoperitoneum” in clinical practice. The description of crescentic free gas under both the domes of the diaphragm parallels a corollary of the Cupola sign due to air accumulation beneath the central tendon of the diaphragm. Rigler’s sign is the double appearance of the bowel wall on plain film when it is outlined by intraluminal and extraluminal air (1). A few more subtle signs such as Doges Cap sign (free air in Morrison’s pouch), Decubitus abdomen sign (air visible below anterior abdomen wall in lateral posture), double bubble sign (gas outlining the left dome and stomach), triangle sign (small triangles of free gas that can typically be positioned between the large bowel and the flank) have being described (1).

The falciform ligament sign was first described in article by Miller and Richardson in conjunction with describing “Football Sign” seen mostly in neonates in whom there is delineation of the generalized peritoneal cavity by free air resulting from intestinal perforation (2, 3). The parallel corollary is the “Urachus sign” as seen by delineation in lower abdomen. A subtle corollary is the ligamentum teres fissure sign where small amount of free air which is confined to fissure for ligamentum teres within the liver (4). It appears as a vertical slit-like lucency in hepatic region whereas ligamentum teres sign seen as a linear opacity of extrahepatic portion of ligamentum teres outlined by free intraperitoneal air. The various ligaments of the anterior abdomen apart from ligamentum teres are often described as structures around which shadows (more subtle) are seen. The Urachus sign is free air delineating the Urachus, the inverted V sign represents air around the lateral umbilical ligaments containing the inferior epigastric vessels (5).

Other signs that are very rarely seen (and appreciated) include air around the gallbladder fundus, isolated lesser sac air due to posterior perforation of duodenum (6). The description of the not so uncommon sign probably allows us to reminiscence the uncommon presentation (albeit important) of common situation, pneumoperitoneum.

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