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**Answer: Chilaiditi's sign and Chilaiditi's syndrome**

Chilaiditi's sign is defined by the asymptomatic interposition of part of the intestine (commonly the hepatic flexure of the colon) between the right hemi-diaphragm and the liver. It is usually an incidental finding. When symptomatic, it is referred to as the Chilaiditi's syndrome. Presentations may range from intermittent recurrent mild abdominal pain to acute intestinal volvulus, though the symptoms reported so far have been inconsistent between different patients and can be non-specific.<sup>1</sup>

Chilaiditi's sign was first described by the Greek radiologist, Dimitrius Chilaiditi. In 1910, he reported three patients with hepato-diaphragmatic interposition of the intestine.<sup>2</sup>

Chilaiditi's sign is relatively rare and is reported to have an incidence of 0.025 to 0.28% based on radiology studies.<sup>3</sup> It is more common in older adults, but has also been reported in children. It can be intermittent and the hepatic flexure of colon reported to be the most common site affected. The ascending colon, transverse colon, and very rarely the small intestine can also get affected.

The exact mechanism of how the bowel gets transposed is unknown. However, the incidence is found to be higher in patients with dolichocolon (abnormally long and mobile colon), liver cirrhosis, increased laxity of the suspensory ligaments, near-term pregnancy, chronic obstructive pulmonary disease and significant weight loss in an obese person.<sup>2</sup>

Physical examination is usually unremarkable with the exception of tympanic right upper quadrant. For diagnosis, erect abdominal or chest radiography are usually sufficient. The condition may be misdiagnosed as visceral perforation if only a chest radiography is done. Features that point towards the diagnosis of Chilaiditi's on radiography are the presence of haustra or valvulae conniventes in the hepato-diaphragmatic space, and the fixation of the position of the radiolucency when position of the patient is changed.<sup>2</sup> Although not required in most cases, computed tomography scan can be used to differentiate and delineate the bowel.

The management of symptomatic Chilaiditi's syndrome is mainly symptomatic and this includes bed rest, fluids, nasogastric decompression, enema, dietary fibres and laxatives. In complicated cases, colectomy or colopexy can be considered.

**REFERENCES**

- 1: Wong WY, Liu YW, Chiu WY, Wong KH, Ng KW. Chilaiditi's Syndrome: A non-emergent cause of free gas under the diaphragm. *Am J Surg* 2008; 198: e25-6.
- 2: Chan SC, Law S, Chu KM. Iatrogenic Chilaiditi's Syndrome. *Gastroint Endosc* 2002; 56: 447-9.
- 3: Orangio GR, Fazio VW, Winkelman E, et al. The Chilaiditi Syndrome and associated volvulus of the transverse colon: an indication for surgical therapy. *Dis Colon Rectum* 1986; 29: 653-6.