Chilaiditi Syndrome

An 8-year-old male was admitted with intermittent upper abdominal pain and constipation. His physical examination was normal. A plain abdominal radiograph showed gas between the liver and the diaphragm (**Figure**, A). Computed tomography demonstrated the presence of interposed colonic loops between the right hemi-diaphragm and the liver with no free intraperitoneal air (**Figure**, B). The patient was diagnosed with Chilaiditi syndrome. Conservative management (a high fiber diet and laxatives) was recommended, and after 2 months he reported that his abdominal pain completely disappeared.

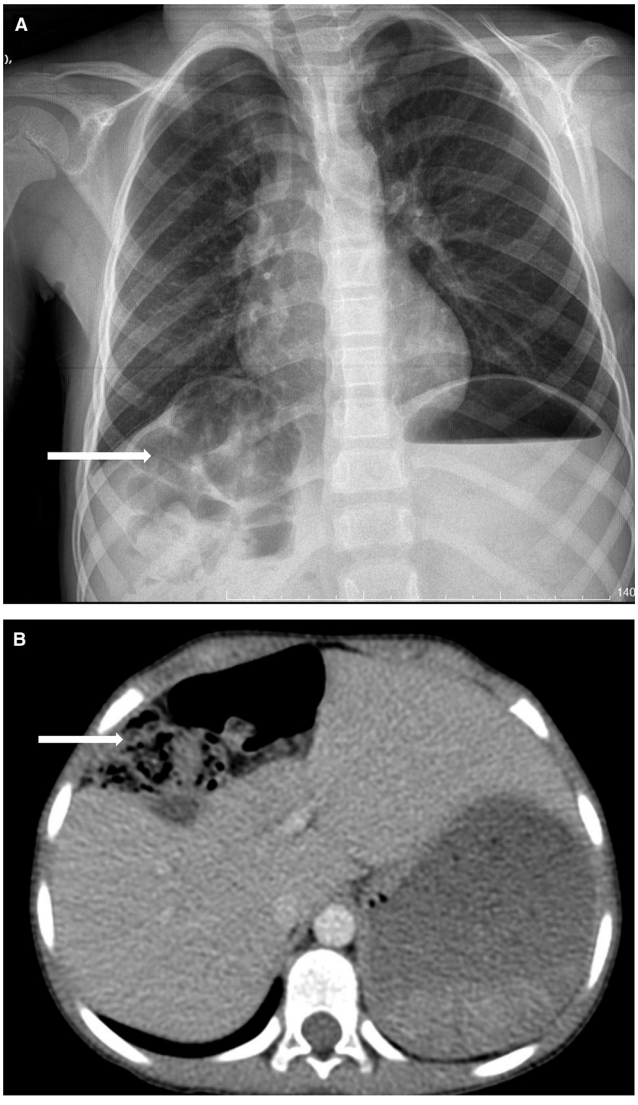

Figure. **A,** Plain abdominal radiograph showed gas between liver and diaphragm. **B,** Colonic interposition was observed at anterior of the liver.

This entity was first described by Demetrius Chilaiditi in 1910.[1] It is a manifestation of hepato-diaphragmatic interposition of the bowel, usually involving the transverse colon. Chilaiditi sign has an incidence of 0.025%-0.28% worldwide with a male predominance (male to female, 4:1).[2,3] In general, patients are asymptomatic, but some patients have been associated with gastrointestinal or respiratory symptoms such as abdominal and/or chest pain. This anatomical variant may be confused with more serious conditions such as pneumoperitoneum and diaphragmatic hernia. Plain radiographs demonstrate gas between the liver and the diaphragm; rugal folds within the gas suggest that it is within the bowel and not free. If there is a clinical suspicion of abdominal visceral perforation and plain radiographic appearances are unclear, abdominal computed tomography can clarify whether there is pneumoperitoneum.

Conservative management is often sufficient in a child with symptomatic Chilaiditi syndrome.[4] ■

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References

1. Chilaiditi D. Zurfrage der hepatoptose und ptoseimallgemeinen im anschluss an drei fälle von temporärer, partiellerleberverlagerung. Fortschr Geb Rontgenstr 1910;16:173-208.
2. Barroso Jornet JM, Balaguer A, Escribano J, Pagone F, Domenech J, del Castillo D, et al. Chilaiditi syndrome associated with transverse colon volvulus: first report in a paediatric patient and review of the literature. Eur J Pediatr Surg 2003;13:425-8.
3. Moaven O, Hodin RA. Chilaiditi syndrome: a rare entity with important differential diagnoses. Gastroenterol Hepatol 2012;8:276-8.
4. Saber AA, Boros MJ. Chilaiditi's syndrome: What should every surgeon know? Am Surg 2005;71:261-3.

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