Turk J Gastroenterol *2014; 25: 448-9*

Morgagni hernia detected due to pneumothorax development during diagnostic colonoscopy

To the Editor,

Colonoscopy is used worldwide for the diagnosis and treatment of colorectal disease (1). Intestinal perforation related to colonoscopy is reported as 0.2%-2% (1,2). Although pneumothorax cases related to colon perforation during colonoscopy are reported in the literature (1,3,4), no pneumothorax case related to perforation of a colon segment strangulated due to Morgagni hernia defect has been encountered.

In line with our literature research, we suppose that this will be the first case. In this case report, a 46-year-old female patient with pneumothorax development during a diagnostic colonoscopy is discussed. Sudden respiratory distress occurred during the colonoscopy of the patient, who was planned to be taken to diagnostic colonoscopy due to constipation complaints. A pneumothorax was detected on the right side in the thorax graph. Laparotomy was performed due to detection of a diaphragm hernia in the computer tomography. Segmental colon resection and end-to-end anastomosis were performed to the patient, whose colon segment, strangulated by a Morgagni hernia during laparotomy, was observed to be perforated. The per-operative Morgagni hernia defect is presented in Figure 1.

Figure 1. Perioperative Morgagni hernia defect of the patient.

Colonoscopy is frequently used for colorectal diseases. Although it is well known by clinicians that there is a high risk of intestinal perforation, painless colonoscopy procedure is especially widely performed. A possible mechanism of the development of subcutaneous emphysema, pneumomediastinum, and pneumothorax after colon perforation is defined by Maunder et al. (5). According to this, the neck thorax and abdomen potential space level can be reached by following the air potential facial layer that has developed in a compartment. As a consequence, the possibility of pneumothorax should definitely be considered when sudden respiratory distress develops during a colonoscopy procedure, and the diagnosis and treatment should be performed quickly. In this case, the patient was taken rapidly to the intensive care unit, and the respiratory distress improved after tube thoracostomy was performed.

While in the literature it is considered that air reaches the thorax from the abdomen through potential spaces in pneumothorax cases observed after colon perforations, in this case, pneumothorax developed due to direct delivery of air to the thorax after perforation of a colon segment strangulated in the Morgagni hernia defect. In conclusion, it is known that pneumothorax

This case was presented as a poster at the 11th National Laparoscopic Endoscopic Surgery Congress, 2-6 October, Mugla, Turkey.
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Received: 2.11.2013 **Accepted:** 27.11.2013

can rarely develop related to air movement from the abdominal cavity to the thorax through potential spaces following colon perforation during a colonoscopy procedure. But, in line with our literature research, we did not observe any pneumothorax case that developed related to direct air movement to the thorax cavity following strangulated intestinal perforation in a Morgagni hernia defect during colonoscopy. Therefore, we conclude that Morgagni hernia, a rare congenital defect, should be definitely considered in the differential diagnosis in pneumothorax-detected patients during colonoscopy.

Ethics Committee Approval: N/A.

Informed Consent: Written informed consent was obtained from patient who participated in this case.

Peer-review: Externally peer-reviewed.

Author contributions: Concept - U.K., S.K.; Design - U.K., S.K.; Supervision - U.K., S.K.; Resource - N.P., U.K., S.K., S.Y.; Materials - N.P., U.K.; Data Collection&/or Processing - N.P., U.K., S.K., S.Y.; Analysis&/or Interpretation - U.K., S.K.; Literature Search - U.K., S.K.; Writing - U.K., S.K., S.Y.; Critical Reviews - U.K., S.K., S.Y.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.

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