Subcutaneous Facial and Neck Emphysema as First Sign of Intestinal Perforation in a Female Patient After a Routine Colonoscopy

Rutin Kolonoskopi Sonrası Bir Kadın Hastada Bağırsak Delinmesinin İlk İşareti Olarak Subkutan Yüz ve Boyun Amfizemi

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ABSTRACT
Colonoscopy is a safe procedure for the diagnosis and management of colorectal diseases. Colonic perforation due to colonoscopy represents an uncommon complication. Here we present an unusual case of iatrogenic bowel perforation resulting in subcutaneous facial and neck emphysema, pneumomediastinum and pneumoretroperitoneum. Taking a detailed recent medical history information is always required when encountering patients with subcutaneous emphysema after invasive examination procedures. Alertness on iatrogenic complication eventualities may improve prognosis and avoid life-threatening conditions.

Keywords: Subcutaneous emphysema, pneumomediastinum, pneumoperitoneum

Introduction
Colonoscopy is a commonly utilized procedure for the evaluation and therapy of colorectal diseases. Although it is considered a relatively safe test, complications such as intestinal perforation may be life-threatening if not diagnosed promptly [1]. Furthermore, although perforation rate has declined compared to the past, advanced interventional colonoscopy during the last years led to an increase trend [1].

We report information on a patient admitted to our facility with subcutaneous emphysema of neck and face, pneumoperitoneum, pneumoretroperitoneum and pneumomediastinum secondary to bowel perforation during routine colonoscopy.

Case Report
A 62-year-old female was admitted to the emergency department of the Saint George General Hospital of Chania, Crete, Greece complaining of chest and mild abdominal pain. Three hours earlier, she underwent a preventive colonoscopy by a gastroenterologist in a private medical practice in order to evaluate symptoms of abdominal discomfort in a private medical practice in order to evaluate symptoms of abdominal discomfort of 3 months duration. Gastroenterologist reported that the procedure was uneventful. Her past medical history included hypertension and hyperlipidemia.

On admission, swelling of the face and neck were noticed. Her vital signs were as follows: blood pressure, 125/65 mmHg; oxygen saturation 97% while she was breathing ambient air; heart rate, 100 per minute; temperature, 36.5 degree Celsius. Laboratory evaluation disclosure included: white blood cell count, 9.90 cells/μL (normal range: 4–11 K/μL); hemoglobin, 13.9 g/
Pathogenesis of the extra-luminal air diffusion secondary to intestinal perforation is attributed to the anatomical continuity between the subcutaneous tissue, the mediastinum and the retro-peritoneum [7]. More specifically, following perforation, intra-luminal air is compressed and it may flee into retroperitoneal or peritoneal cavity [7]. From the retroperitoneal level, air is moving next to the fascial plans, mesentery and through the esophageal hiatus passes into the mediastinum and subcutaneous tissues [7]. In case of rupture of the mediastinal parietal pleura, pneumothorax may occur [8]. It is also remarkable that eventually, intestinal perforation is not detected and gas insufflations continue, situation may be complicated with tension pneumo-thorax with adverse outcomes in terms of prognosis and mortality [7, 8]. Possible clinical presentations of this complication also include pneumo-pericardium, periorbital edema and pneumo-scrotum [9].

Following perforation, symptoms may appear either immediately or after several hours [9, 10]. Abdominal pain and tenderness are suggestive of intra-peritoneal perforation [9]. High body temperature, leukocytosis and sinus tachycardia are usually present with intra and extra-peritoneal perforation [9].

Management should be individualized on a case-by-case basis [3]. In the absence of signs of peritoneal inflammation, a conservative management with intravenous wide spectrum antibiotic therapy is suggested. In the presence of fecal intestinal content or signs of peritoneal inflammation, a surgical approach is required [3]. In alignment, distal obstruction, worsening inflammation, a surgical approach is required [9]. In alignment, distal obstruction, worsening inflammation, a surgical approach is required [9].

Clipping during endoscopy could be performed in some cases if small tears of the colonic wall exist [2, 5].

Here, we presented a rare case of extra peritoneal perforation after a diagnostic colonoscopy referred to the hospital with signs of facial and neck subcutaneous emphysema. Physicians have to be alert of this rare complication and refer patients in order to be timely diagnosed and closely monitored.
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References