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

Dimitrios Anyfantakis1, Miltiades Kastanakis2, Paraskevi Karona2, Alexandros Papadomichelakis2, Emmanouil Bobolakis2

1Primary Health Care Centre of Kissamos, Crete, Greece
2First Department of Surgery, Saint George General Hospital of Chania, Crete, Greece

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, pneumomediastinum, pneumoretroperitoneum 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 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/dL (normal range: 13.5–17.5 g/dL); hematocrit, 42.1% (normal range: 40–50%); platelet counts, 135 cells/μL (normal range: 150–450 K/μL). Urine analysis and urine culture were normal. Biochemical parameters were within normal limits. An arterial blood gas analysis showed: pH, 7.48; PaCO₂, 25.3
mmHg; PaO₂, 72.6 mmHg. Her electrocardiogram revealed sinus rhythm with no abnormal findings.

Physical examination disclosed a distended abdomen with diffuse sensitivity on palpation without tenderness and crepitus in the left part of neck and buccal area. Imaging studies included chest X-ray and thoracic and abdominal thoracic scans showing pneumomediastinum, pneumoretroperitoneum, and subcutaneous emphysema of the neck (Figures 1-4).

During colonoscopic examination, the gastroenterologist noticed a large inflamed diverticulum at the sigmoid level. The patient was consequently transferred to the Surgery department of our hospital. Due to the absence of peritonitis signs, a conservative management was decided with a triple scheme intravenous antibiotic administration (cefotaxime, metronidazole, amikacin). Daily follow-up assessment of the patient's situation with chest and abdominal radiographic examination was performed. Subcutaneous emphysema as well as pneumomediastinum and retro-peritoneum started to resolve progressively. Following an uneventful 8-day hospital stay, the patient was discharged to home on good clinical condition.

Discussion

Intestinal perforation following colonoscopy represents a rare complication [2]. In a retrospective study on more than thirty thousand patients, it was found to be only 0.1%
Physicians have to be alert of this rare complication and refer patients in order to be timely diagnosed and closely monitored.

**Informed Consent:** Informed consent was obtained from patients who participated in this study.

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept - D.A., M.K., P.K.; Literature Review - D.A., P.K.; Writing - D.A., P.K.; Critical Review - M.K., A.P., E.B.

**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.

**References**

1. Panteris V, Haringsma J, Kuipers EJ. Colonoscopy perforation rate, mechanisms and outcome: from diagnostic to therapeutic colonoscopy. Endoscopy 2009; 41: 941-51. [CrossRef]