

CASE REPORT

A Pain In The Neck

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Abstract

Colonoscopy is a generally safe test whose use is rapidly increasing; complications are unusual and the accepted rate of perforation after diagnostic colonoscopy is between 1 in 800-1500 cases. Colonoscopic perforation may not be recognised at the time and the patient may present to a variety of medical practitioners after discharge from hospital. The presentation is usually with abdominal pain. We report an unusual presentation of colonoscopic perforation in which the patient attended the Emergency Department complaining of a painful neck.

Introduction

Colonoscopy is a commonly performed diagnostic and therapeutic procedure with a low overall complication rate [1], the use of which is increasing enormously [2]. Despite its relative safety, it can result in unusual clinical presentations which doctors from a range of specialities should be aware of. We report the case of a gentleman who presented to the Emergency Department with neck pain which was the result of a colonic perforation at colonoscopy earlier that day.

Case Report

A 54-year-old man presented to the Emergency Department complaining of sudden onset neck pain and swelling. He had undergone a diagnostic colonoscopy earlier that day to investigate longstanding diarrhoea; the procedure had been abandoned before completion as the patient had experienced significant abdominal discomfort. Post-procedure observations were normal and he had been discharged home. Following discharge he had started to feel short of breath and experienced a short-lived episode of central chest pain. He felt sweaty and non-specifically unwell, and experienced a near-syncope episode. On arrival in the Emergency Department his main complaint was of a painful, swollen neck. On direct questioning he also reported mild right-sided abdominal discomfort. Apart from the diarrhoea he was fit and well with no other significant medical problems and was on no regular medication.

On physical examination he was in pain and looked unwell. He had an obviously swollen neck with crepitus on palpation, but normal heart rate, blood pressure and oxygen saturations. He was mildly pyrexial (37.5°C). Chest examination was normal and abdominal examination revealed a soft, non-peritonitic abdomen with mild tenderness in the right iliac fossa.

A chest x-ray (Figure 1) showed sub-diaphragmatic gas, subcutaneous emphysema, pneumomediastinum and pneumopericardium. The diagnosis of colonic perforation was made, and he was initially managed with oxygen, intravenous fluids, antibiotics and analgesia and referred to the general surgeons. After a trial of conservative management, worsening abdominal pain and fever resulted in laparotomy. Surgery revealed a sigmoid perforation in a segment of marked diverticular disease

with large amounts of retroperitoneal gas. An anterior resection with primary anastomosis was performed removing all of his visible diverticular disease. He was discharged home one week later without further complication. Histology subsequently confirmed the diagnosis of perforated diverticular disease. He has had no subsequent complications from this episode.

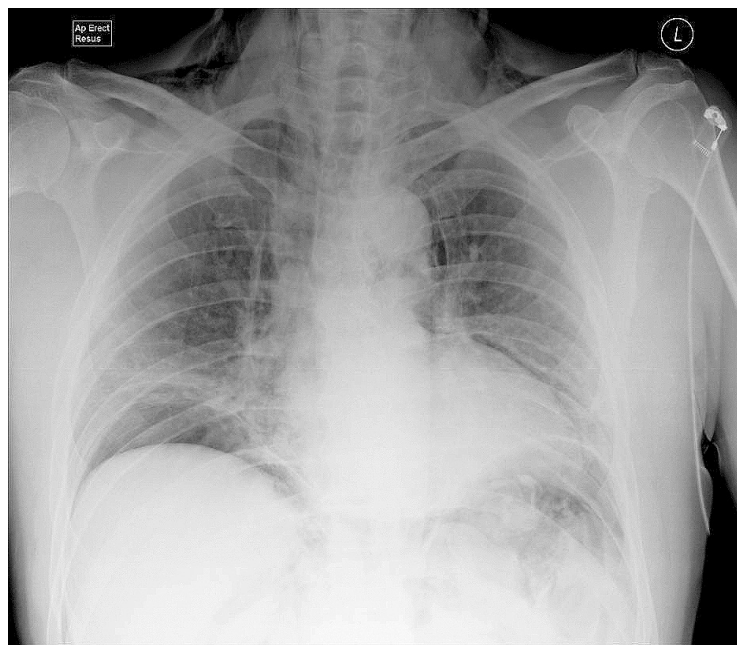


Figure 1. Erect Chest x-ray on admission to the Emergency Department. Free air is most noticeable under the right hemidiaphragm and along the left heart and aorta. Surgical emphysema is evident throughout the soft tissues of the neck

Discussion

Colonoscopy is an increasingly commonly performed outpatient procedure. The British Society of Gastroenterology have recommended a 5 fold increase in UK colonoscopy capacity over the last 15 years [3]. Although invasive, it has a low rate of reported complication, with two large studies reporting perforation rates for diagnostic colonoscopy of 0.08% and 0.12% [4,5]. The UK National Bowel Cancer Screening project suggests a perforation rate of 1 in 1500 colonoscopies [6]. Perforation rates are unsurprisingly higher when therapeutic manoeuvres are employed [7]. Perforations during diagnostic endoscopy may be mechanical or from barotrauma after excessive insufflation of air. Mechanical

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perforation is not usually due to direct trauma from the tip of the endoscope, but is more commonly due to stretch on the sigmoid colon when a loop in the colonoscope has formed. Perforation is more likely if the colon is diseased, and malignancy, diverticular disease and inflammatory bowel disease all increase the risk of perforation [8]. Patients will most commonly present with abdominal pain and distension and may describe the onset of the pain as extremely sudden; other symptoms include fever, vomiting, rectal bleeding, shoulder tip or chest pain, breathlessness and sudden collapse [9]. Clinical examination findings can vary from frank peritonism through to a complete absence of clinical signs. Although colonoscopy is most usually undertaken under the auspices of colorectal surgeons or gastroenterologists, patients suffering complications such as perforation may present to a wide variety of other specialities including General Practice, Emergency Medicine, General Medicine or General Surgery.

Perforation after colonoscopy can be managed either conservatively or surgically. Initial emergency management consists of analgesia, intravenous fluids and broad-spectrum antibiotics. Ongoing conservative management is appropriate if the patient has no peritonism, is apyrexial and clinically improves over the next few hours. It is assumed that non-operative management of these cases is successful because the degree of peritoneal contamination after perforation of a prepared colon is minimal. Surgical intervention is indicated if the patient is septic, peritonitic or failing to improve with conservative measures.

A number of case reports describe the accumulation of air outside the abdomen following colonoscopy [10-17]. As parts of the colon are retroperitoneal, free gas may track along fascial planes resulting in pneumoscrotum or subcutaneous emphysema [18]. Air tracking from the retroperitoneum can pass into the thorax via the diaphragmatic hiatus, and onwards to cause pneumomediastinum and subcutaneous emphysema. Pneumopericardium may occur as air enters the pericardium at the pericardial reflection adjacent to the pulmonary veins [19], although this mechanism is not confirmed.

Conclusion

Medical, surgical, emergency department and primary-care doctors should all be vigilant for the more unusual complications of colonoscopy which may at first glance seem unrelated.

Consent: informed written consent was obtained from the patient for publication of this case report.

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