

Novel use of cap-assisted enteroscopy for detection of colorectal tumor in a patient with incarcerated inguinal hernia

Victoria PY Tan, Ivan WC Wong, Yuk Tong Lee

Victoria PY Tan, Department of Medicine, University of Hong Kong, Hong Kong, China

Ivan WC Wong, Faculty of Medicine, University of Hong Kong, Hong Kong, China

Yuk Tong Lee, Department of Medicine and Therapeutics, The Chinese University of Hong Kong, Hong Kong, China

Author contributions: Tan VPY and Wong IWC wrote the manuscript and performed the literature search; Tan VPY and Lee YT reviewed and selected the images for publication; Lee YT performed the procedure and acquired the images for publication; Tan VPY, Lee YT and Wong IWC approved the final version for publication.

Correspondence to: Dr. Victoria PY Tan, Department of Medicine, University of Hong Kong, Room 803, Administrative Building, Hong Kong, China. vpytan@hku.hk

Telephone: +852-22554049 Fax: +852-28186474

Received: March 5, 2014 Revised: April 30, 2014

Accepted: September 16, 2014

Published online: October 16, 2014

Abstract

Multiple reports have documented unsuspected inguinal hernias which result in difficulties during the colonoscopic examinations of patients. In most cases, the colonoscopy can be delayed until a surgical consult has further evaluated the inguinal hernia. This case report documents a patient who required a colonoscopy but surgical intervention for the detected inguinal hernia was not appropriate due to his co-morbid medical conditions. With the use of the combination of an enteroscope fitted with a cap and fluoroscopy, the inguinal hernia was able to be negotiated and the diagnosis of a cecal carcinoma was able to be confirmed.

© 2014 Baishideng Publishing Group Inc. All rights reserved.

Key words: Inguinal hernia; Cap-assisted colonoscopy; Cecal carcinoma; Fluoroscopy; Enteroscope

Core tip: Patients with inguinal hernias who are unfit for surgical repair but who have otherwise strong indications for colonoscopy are at risk of failed colonoscopy or an incarcerated colonoscope. This case study demonstrates that the use of a cap fitted to a more flexible enteroscope with fluoroscopic guidance can aid in the negotiation of the scope past the loops of bowel in the hernia sac.

Tan VPY, Wong IWC, Lee YT. Novel use of cap-assisted enteroscopy for detection of colorectal tumor in a patient with incarcerated inguinal hernia. *World J Gastrointest Endosc* 2014; 6(10): 510-512 Available from: URL: <http://www.wjgnet.com/1948-5190/full/v6/i10/510.htm> DOI: <http://dx.doi.org/10.4253/wjge.v6.i10.510>

INTRODUCTION

Patients with inguinal hernias are not uncommonly encountered by endoscopists performing colonoscopy. In patients with known large inguinal hernias or complicated inguinal hernias, including incarcerated hernias, surgical repair prior to colonoscopy is clinically indicated. However, in some circumstances, patients are unable to undergo surgical repair despite strong indications for the colonoscopy to be performed persisting. This case report demonstrates a strategy for facilitating the completion of a colonoscopy in such a patient.

CASE REPORT

A 79-year-old man with a history of severe aortic regurgitation and cardiac failure, presented with anemia and positive fecal occult blood testing. Gastroscopy was normal. A prior colonoscopic examination failed due to poor bowel preparation. He was referred for a second

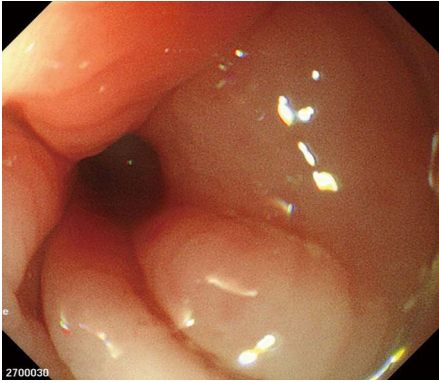


Figure 1 “Stricture” seen at sigmoid colon on initial colonoscopy.

colonoscopy after polyethylene glycol preparation. During colonoscopy a “tight stricture” was encountered at the sigmoid colon. When the patient was turned, a large incarcerated left inguinal hernia was detected. The procedure was repeated with an enteroscope (Olympus SIF-Q260) fitted with a 4-mm cap at the tip, and under fluoroscopic guidance (Figure 1). Finally, with the aid of the cap, the scope negotiated through the acute bend inside the hernia sac and reached the cecum, where a large sessile tumor was found (Figure 2). Biopsies confirmed adenocarcinoma. No complication occurred during or after the procedure. The patient declined surgery due to his co-morbid conditions and died 3 mo later from cardiac causes.

DISCUSSION

Unexpected hernia detected during or after screening colonoscopy is not uncommon^[1-5]. It may cause failure of the colonoscopy procedure^[1-3] or result in a surgical emergency due to a colonoscopy induced strangulated bowel loop or incarceration^[4,5]. Endoscopists should maintain a high index of suspicion when a “stricture” is seen in association with normal looking mucosa and consider whether a hernia could be a contributing factor. It is easy to detect the presence of inguinal hernia with proper exposure of the patient, however, for other types of hernia, fluoroscopic examination may be required^[4,5]. In cases where an inguinal hernia is detected, colonoscopy should be delayed until a surgical opinion is sort however for cases where surgery would be inappropriate and colonoscopy still warranted, the use of fluoroscopic guidance can prevent inadvertent looping during scope passage through the hernia. The use of cap-assisted method, which had been shown to reduce colonoscopy failure rate^[6], together with the use of a thin enteroscope contributed to the success of the examination.

COMMENTS

Case characteristics

A case of a patient with strong indications for a colonoscopy and an incarcer-

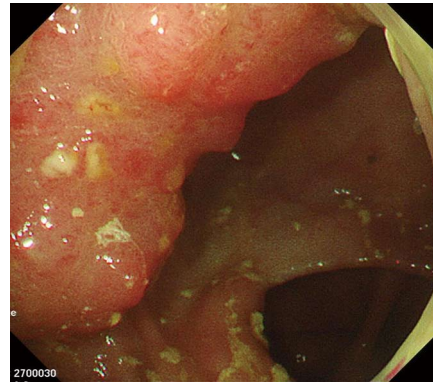


Figure 2 Cecal adenocarcinoma diagnosed using cap-assisted enteroscopy.

ated inguinal hernia whose co-morbid medical conditions preclude surgical repair of the inguinal hernia.

Clinical diagnosis

The clinical diagnosis after cap-assisted colonoscopy performed with an enteroscope was cecal adenocarcinoma.

Differential diagnosis

Possible differential diagnoses include bleeding colonic polyp, bleeding colonic angiodysplasia and colonic neoplasms.

Laboratory diagnosis

Prior to the colonoscopy, the patient had iron deficiency anemia and fecal occult blood testing of his stools were positive.

Pathological diagnosis

A large sessile polyp suspicious for a neoplasm was seen in the cecum, which was biopsied and sent for histopathology confirming cecal adenocarcinoma.

Treatment

The patient declined surgery due to his co-morbid conditions that had precluded surgery for his inguinal hernia in the first place and died 3 mo later from cardiac causes.

Related reports

Negotiation through loops of bowel incarcerated in a hernia sac utilizing a cap fitted onto an enteroscope has seldom been reported in the literature, and is a useful strategy for endoscopists to consider when a similar circumstance presents itself.

Experiences and lessons

This case reports discusses a case where a patient had strong indications for a colonoscopy despite the presence of an incarcerated inguinal hernia, and presents a strategy utilizing a cap fitted to an enteroscope for facilitating the completion of the colonoscopy to enable the diagnosis of cecal adenocarcinoma to be made.

Peer review

This paper is helpful for clinical practice.

REFERENCES

- 1 Tan VP, Lee YT, Poon JT. Incarceration of a colonoscope in an inguinal hernia: Case report and literature review. *World J Gastrointest Endosc* 2013; **5**: 304-307 [PMID: 23772270 DOI: 10.4253/wjge.v5.i6.304]
- 2 Leisser A, Delpre G, Kadish U. Colonoscope incarceration: an avoidable event. *Gastrointest Endosc* 1990; **36**: 637-638 [PMID: 2279673 DOI: 10.1016/S0016-5107(90)71200-X]
- 3 Lee YT, Hui AY. Failed colonoscopy due to hernia. *Endoscopy* 2004; **36**: 758 [PMID: 15280999 DOI: 10.1055/s-2004-825692]
- 4 Alder AC, Scott DL, Browning JD. Colonoscopy: an unusual complication. *Gastroenterology* 2010; **138**: 434, 794 [PMID: 20034601]

- 5 **DeMuro JP.** Incarcerated spigelian hernia after colonoscopy. *Am Surg* 2012; **78**: E260-E261 [PMID: 22546098]
- 6 **Lee YT, Hui AJ, Wong VW, Hung LC, Sung JJ.** Improved

colonoscopy success rate with a distally attached mucosectomy cap. *Endoscopy* 2006; **38**: 739-742 [PMID: 16673307 DOI: 10.1055/s-2006-925238]

P- Reviewer: Gao C, Seow-Choen F **S- Editor:** Ji FF
L- Editor: A **E- Editor:** Zhang DN





Published by **Baishideng Publishing Group Inc**

8226 Regency Drive, Pleasanton, CA 94588, USA

Telephone: +1-925-223-8242

Fax: +1-925-223-8243

E-mail: bpgoffice@wjgnet.com

Help Desk: <http://www.wjgnet.com/esps/helpdesk.aspx>

<http://www.wjgnet.com>

