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Rare case of delayed splenic injury post colonoscopy in a regional hospital

Rukmini Kulkarni, Kurt Verschuer

General Surgery Registrar, Goulburn Base Hospital, Goulburn, NSW, Australia

ORCID of the author(s)

RK: https://orcid.org/0000-0002-6745-6008
KV: https://orcid.org/0009-0004-5846-4833

Abstract

Splenic injury is a rare but recognized complication of colonoscopy. Although most injuries present within 24–48 hours, delayed presentations up to 7–13 days have been reported, likely related to traction on splenic ligamentous attachments during maneuvers at the splenic flexure. A 52-year-old woman underwent an uncomplicated elective colonoscopy with cold-snare polypectomy and remained asymptomatic until day 6, when she developed pleuritic left-sided chest pain, tachycardia, and mild left upper quadrant discomfort. Pulmonary embolism was initially suspected; CT pulmonary angiography showed no embolus but incidentally demonstrated a perisplenic subcapsular hematoma. CT mesenteric angiography confirmed a stable hematoma without arterial extravasation, with a small volume of reactive intraperitoneal fluid. She was managed conservatively with serial abdominal examinations, 6-hourly hemoglobin monitoring, intravenous fluids, and patient-controlled analgesia. Her hemoglobin decreased from 128 g/L to 93 g/L over 24 hours and then remained stable without transfusion; repeat imaging showed mild interval progression of hemoperitoneum without active bleeding. One month later, she re-presented with tachycardia and abdominal discomfort; imaging demonstrated a resolving hematoma with a reactive left pleural effusion. This case highlights delayed splenic subcapsular hematoma following an otherwise uncomplicated colonoscopy and emphasizes the need to consider splenic injury in patients presenting with left upper quadrant pain or pleuritic chest pain after recent colonoscopy, where early imaging and careful monitoring can support safe non-operative management in hemodynamically stable patients.

Keywords: colonoscopy, splenic hamatoma, delayed presentation, splenic injury, post-colonoscopy complication, case report

Corresponding Author
Rukmini Kulkarni
2b Ocean Street, Towradgi, NSW 2518, Australia
E-mail: kulkarnirukmini01@gmail.com

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The authors stated that the written consent was obtained from the patient presented with images in the study.

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Introduction

Splenic injury is a rare but recognized complication of colonoscopy. Although colonoscopy is generally considered a safe procedure, registry-based data estimate the incidence of splenic injury to range from 3–14 per 100,000 procedures [1], with earlier series reporting rates as low as approximately 1 in 70,000 [2, 3]. Most splenic injuries present within the first 24–48 hours and typically manifest as abdominal pain, hemodynamic instability, or a decline in hemoglobin [3, 4]. However, the true incidence is likely underestimated due to variable presentations and the potential for subclinical injury [3].

Proposed mechanisms relate to traction and transmitted forces across the splenocolic ligament and other stabilizing attachments, including the phrenicocolic, splenorenal, and gastrosplenic ligaments [5-7]. When torque is applied to negotiate the splenic flexure—particularly with looping, external abdominal pressure, adhesions, or a fixed left colon—tension on these attachments may result in capsular tears, subcapsular hematoma, or rupture [7]. Anticoagulation, splenomegaly, and prior abdominal surgery have also been suggested as potential risk modifiers [3, 7, 8].

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Although most patients present early, delayed symptom onset up to 7–13 days after colonoscopy has been described [5, 9-12]. Such cases can be diagnostically challenging because symptoms may be vague or misattributed to more common cardiopulmonary or musculoskeletal causes [4, 9]. We present a case of splenic subcapsular hematoma presenting six days after an uncomplicated colonoscopy, emphasizing the importance of recognizing delayed splenic injury.

Case presentation

A 52-year-old woman with gastro-oesophageal reflux disease (GORD), managed with esomeprazole 20 mg daily, underwent elective gastroscopy and colonoscopy at a regional hospital in New South Wales, Australia after a positive fecal occult blood test (FOBT). She was a non-smoker and reported moderate alcohol intake (two to three standard drinks on three to four days per week). Her history included several prior emergency department presentations for sinus tachycardia, palpitations, and left-sided chest pain of uncertain etiology, without a definitive diagnosis. She took no other regular medications and reported no limitation in mild-to-moderate physical activity.

The colonoscopy was uncomplicated, and the colonoscope was advanced to the terminal ileum. Bowel preparation and mucosal visualization were excellent. The terminal ileum appeared normal. A small sessile polyp approximately 49 cm from the anal verge was removed using a cold-snare technique. No other abnormalities were identified (Figure 1). She was discharged the same day with routine instructions and follow-up for histology review. The immediate recovery period was uneventful. A post-procedure telephone review the following day confirmed she remained symptom-free.

Six days later, she presented with sudden-onset sharp left-sided pleuritic chest pain while seated at work, radiating to the left shoulder and associated with shortness of breath and palpitations. She also reported mild left upper quadrant discomfort. On arrival, she was anxious but alert. Observations demonstrated tachycardia and hypertension; she was afebrile and normoxic. Initial laboratory investigations showed a normal hemoglobin level with mild leukocytosis.

Given pleuritic chest pain and tachycardia, pulmonary embolism was suspected. Electrocardiography showed sinus tachycardia without ischemic changes, and serial troponins were negative. CT pulmonary angiography demonstrated no pulmonary embolism and no acute intrathoracic pathology; however, upper abdominal images incidentally revealed a perisplenic collection consistent with a hematoma.

General surgery was consulted. The patient reported persistent left upper quadrant pain exacerbated by inspiration and lying supine, with radiation to the left shoulder. She remained hemodynamically stable. Examination revealed focal left upper quadrant tenderness without guarding or peritonism. She denied trauma and had no known coagulopathy.

A dedicated CT mesenteric angiogram (CTMA) (Figures 2 and 3) confirmed a perisplenic subcapsular hematoma with uniform splenic enhancement and no evidence of active arterial extravasation, pseudoaneurysm, laceration, or hypoperfusion. A small volume of free intraperitoneal fluid was present, without free gas. Findings were most consistent with delayed splenic injury related to the colonoscopy performed six days earlier.

Figure 2. Axial films of CT Mesenteric Angiogram

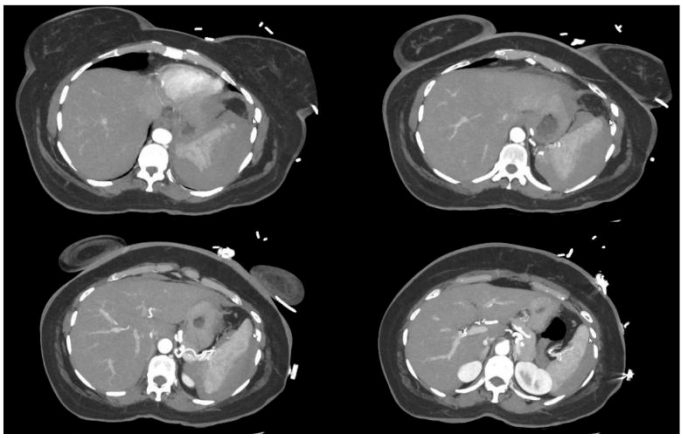
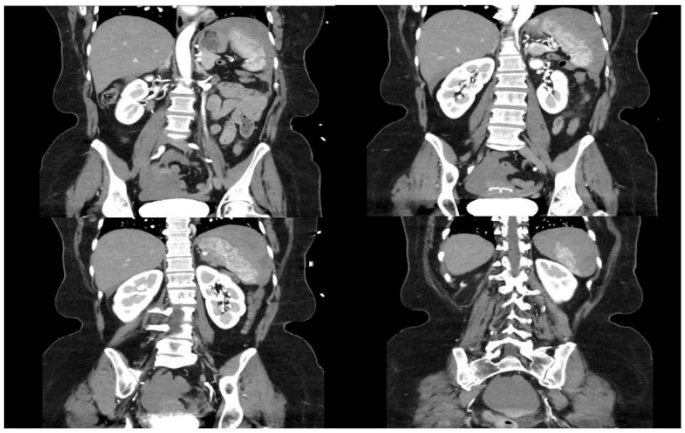


Figure 3. Coronal films of CT Mesenteric angiogram



She was admitted for non-operative management, including serial abdominal examinations, regular hemoglobin monitoring, intravenous fluids, and patient-controlled analgesia. During the first 24 hours, her hemoglobin declined (Figure 4), but she remained clinically stable. Repeat CT abdomen and pelvis the following morning demonstrated a stable subcapsular hematoma with a slight increase in hemoperitoneum, without active bleeding. She was transferred to a tertiary hospital for continued observation. Her hemoglobin stabilized and she was discharged after two additional days.

Figure 1. Colonoscopy images

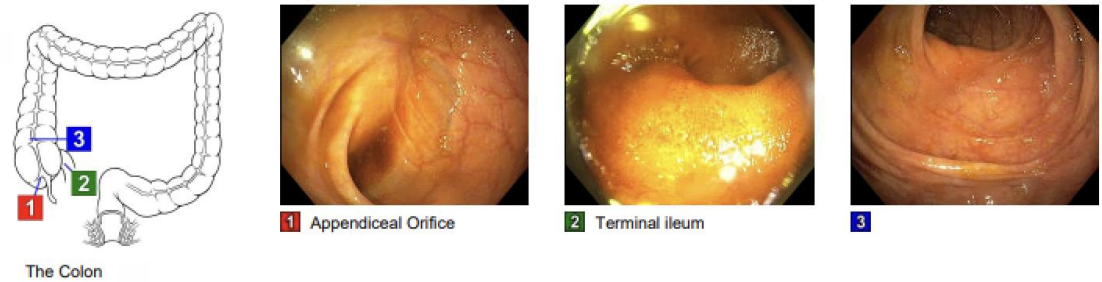
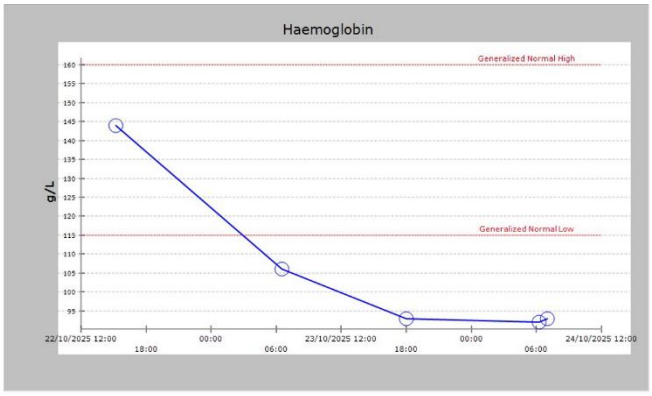


Figure 4. Graph of hemoglobin trend over 24hrs of observation



Approximately one month later, she re-presented with persistent abdominal discomfort and tachycardia. CT pulmonary angiography again showed no pulmonary embolism but demonstrated a mild-to-moderate left pleural effusion with adjacent atelectasis. Abdominal imaging showed interval evolution of the subcapsular hematoma with no arterial extravasation and no hemoperitoneum. She was managed supportively and discharged the next day.

Six weeks later, she re-presented with worsening dyspnea, pleuritic chest pain, and systemic inflammatory features. Chest imaging (Figure 5) showed a large left pleural effusion progressing to a massive effusion requiring intercostal catheter drainage of approximately 2,000 mL of serous fluid, necessitating intensive care unit monitoring. CT chest demonstrated left upper lobe consolidation extending into the lingula with near-complete left lower lobe collapse due to the effusion, consistent with pneumonia (Figure 6). Concurrent abdominal imaging showed continued reduction in the splenic subcapsular hematoma with no active bleeding. She improved with pleural drainage and intravenous antibiotics, and the catheter was removed after three days.

Figure 5. Chest Xray- confirming large left sided pleural effusion

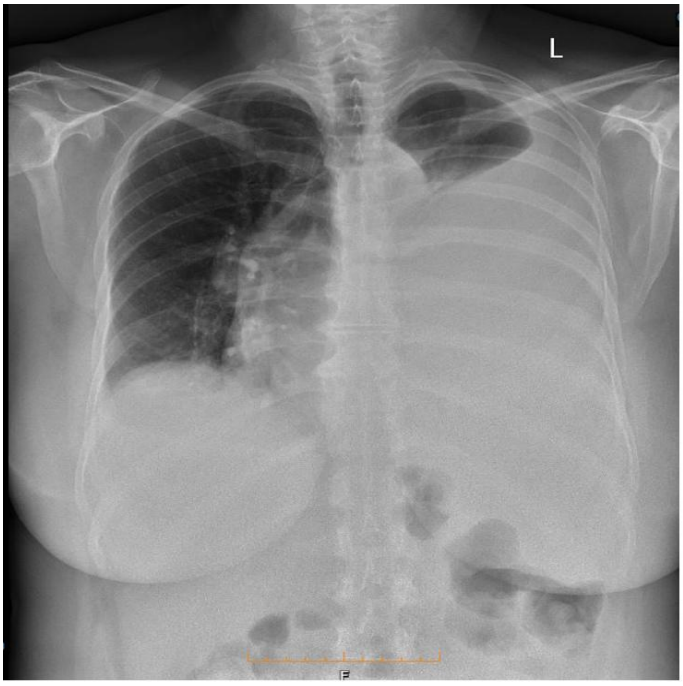
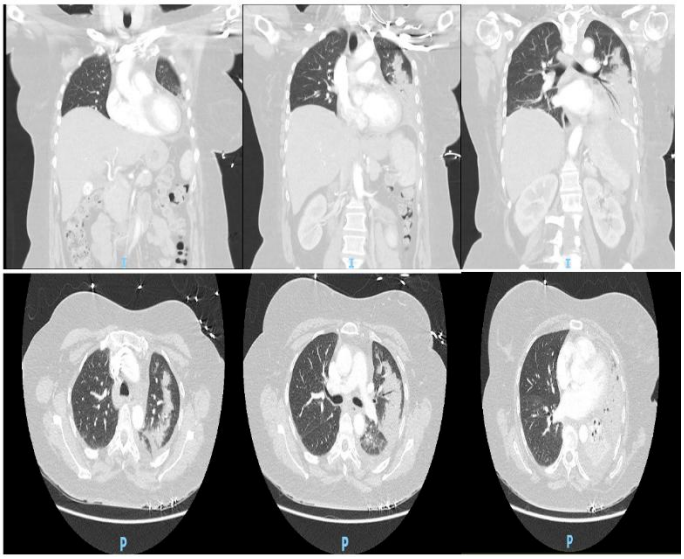


Figure 6. CT Chest showing consolidation, left sided effusion and atelectasis



Discussion

Splenic injury is uncommon but potentially serious. Contemporary estimates suggest an incidence of 3–14 per 100,000 procedures, while earlier series reported lower rates [1-3]. Most cases present within 24–48 hours with left upper quadrant pain, hemodynamic instability, and/or a hemoglobin decline [3, 4]. Delayed presentations are rarer and diagnostically challenging because symptoms may be atypical and can mimic cardiopulmonary disease [4, 5].

Delayed symptom onset up to 7–13 days has been described and may reflect the evolution of minor capsular tears or subcapsular hematomas that initially remain clinically silent [5, 9-12]. Presentations may include gradual onset left upper quadrant pain, Kehr's sign, pleuritic chest pain, dyspnea, or progressive anemia. In some patients, diaphragmatic irritation predominates and can lead to an initial workup for pulmonary embolism or cardiac pathology [4-8]. Incidental identification of a subcapsular hematoma on CT pulmonary angiography in this case underscores the value of considering abdominal pathology when evaluating pleuritic pain following recent colonoscopy.

Mechanistically, traction on splenic ligamentous attachments—especially during negotiation of the splenic flexure, with looping, torque, adhesions, or external abdominal pressure—may transmit forces sufficient to injure the splenic capsule [5-7]. Preventive principles include gentle advancement, minimizing torque, frequent loop reduction, avoiding unnecessary left upper quadrant pressure, and patient repositioning when flexure intubation is difficult [9-11].

Non-operative management is appropriate for hemodynamically stable patients without evidence of active extravasation and is successful in most contemporary series [11]. Key components include close observation, serial clinical examinations, hemoglobin monitoring, and repeat imaging when clinically indicated. In this case, conservative management was successful, and later pleuropulmonary complications were managed supportively [13].

Conclusion

Delayed splenic subcapsular hematoma can occur after an otherwise uncomplicated colonoscopy. Splenic injury should be considered in patients presenting with left upper quadrant pain,

shoulder-tip pain, or pleuritic chest pain after recent colonoscopy, even several days after the procedure. Early imaging, careful monitoring, and timely surgical review support safe non-operative management in hemodynamically stable patients.

References

1. Koop H, Arnold D, Korchidi S, Honselmann KC, Stremmel W, Baberg HT. Splenic injury associated with colonoscopy in hospitalized patients: a registry-based study. Endoscopy. 2024;56(8):e592-8.
2. Kamath AS, Iltzsch NJ, Minion DJ, Endean ED, Lincourt AE, Heniford BT. Colonoscopic splenic injuries: incidence and management. J Laparoendosc Adv Surg Tech A. 2009;19(3):373-7.
3. Jehangir A, Poudel DR, Karmacharya P, Ghimire S, Alweis R. Splenic injury during colonoscopies: a systematic review. Ann Med Surg (Lond). 2016;17:14-9.
4. Ullah W, Rashid MU, Mehmood A, Sarwar U, Hussain I, Sohail U, et al. Splenic injuries secondary to colonoscopy: rare but serious complication. World J Gastrointest Surg. 2020;12(4):139-47. doi:10.4240/wjgs.v12.i4.139.
5. Fishback SJ, Pappas TN, Tyler DS, Eubanks S. Splenic injury from colonoscopy: outcomes and management in a multicenter series. Am Surg. 2011;77(7):911-3.
6. Shankar S, Rowe S. Splenic injury after colonoscopy: case report and review of literature. Ochsner J. 2011;11(3):276-81.
7. Sharma VK, Howden CW. Splenic injury after colonoscopy: rare but serious. Gastrointest Endosc. 2006;64(4):604-5.
8. Lukies M, McCallum L, Badurdeen D, MacDonald R, Trevillian P. Splenic injury during colonoscopy: modern treatment options and outcomes. Acta Gastroenterol Belg. 2022;85(4):619-23.
9. Esberard BC, Becker LK, Tustumi F, Morrell ALG, Junior UR. Splenic injury: a rare complication of lower endoscopy. Clin Case Rep. 2020;8(1):102-5.
10. Adhikary S, Pillai AK, El-Sawy T, Gupta M. Splenic injury following colonoscopy: an unusual complication. Case Rep Gastroenterol. 2014;8(3):393-8.
11. Touati J, Benabderrazek W, Sahtout S, Boudaouara H, Dziri C. Delayed splenic rupture following colonoscopy: a case report. Int J Surg Case Rep. 2024;111:108118.
12. Korkut E, Uprak K, Ozcan O, Selcukbiricik F, Koca B, Tas A. Splenic injury due to colonoscopy: a rare complication. North Clin Istanb. 2018;5(3):247-50. doi:10.14744/nci.2017.07946.
13. Moriwake A, Hasegawa T, Okamura R, Moriwake K, Isozaki H, Takama T, et al. Subcapsular splenic hematoma after screening colonoscopy: a case report. Clin J Gastroenterol. 2024;17(3):475-80. doi:10.1007/s12328-023-01821-8.