Juniper Online Journal of Case Studies
ISSN: 2476-1370

Juniper Publishers
key to the Researchers

Clinical Image
Volume 16 Issue 2 June 2026
DOI: 10.19080/JOJCS.2026.16.555932

JOJ Case Stud

Shoulder Pain After Appendectomy

Carlos Felipe Bustillos Serna[1]*, Sol Angie Rincon Mora[2], Adriana Milena Castrillón Herrera[3] and Julio César Moreno Alfonso[4]

[1]*School of Medicine, Pontificia Universidad Javeriana Cali, Colombia*

[2]*School of Medicine Fundación Universitaria Sanitas, Bogotá, Colombia*

[3]*Clínica Medicadiz, Colombia*

[4]*Department of Pediatric Surgery, Hospital Universitario de Navarra. Pamplona, Spain & Fundación Universitaria Juan N. Corpas (FUJNC), Colombia*

Submission: June 01, 2026; **Published:** June 09, 2026

***Corresponding author:** Carlos Felipe Bustillos Serna, School of Medicine Pontificia Universidad Javeriana Cali, Cali, Valle del Cauca, Colombia

Keywords: Single-port transumbilical surgery; Acute appendicitis; Case report; Pneumoperitoneum

Case Report

A 13-year-old boy underwent urgent single-port transumbilical video-assisted appendectomy for acute phlegmonous appendicitis (Figure 1). Eight days later, he presented to the emergency department with acute, well-localized pain at the xiphoid process and right shoulder that worsened in the supine position, without fever or abdominal pain. Physical examination revealed a soft, non-tender abdomen without peritoneal signs; the umbilical wound showed mild erythema without signs of infection.

Given the clinical presentation, chest and abdominal radiographs were obtained, demonstrating bilateral subdiaphragmatic free air (Figure 2), more evident beneath the left hemidiaphragm, with normal intestinal gas distribution and no radiological signs of intra-abdominal complication (Figure 3). In the context of a benign clinical status and normal abdominal examination, these findings were interpreted as residual postoperative pneumoperitoneum causing diaphragmatic irritation and referred shoulder pain. The patient showed favourable clinical evolution with conservative management and remained asymptomatic at follow-up.

Residual pneumoperitoneum is a common finding after laparoscopic procedures and may persist beyond the immediate postoperative period [1]. In children, diaphragmatic irritation caused by subdiaphragmatic free air may manifest as abdominal, chest or shoulder pain, potentially mimicking complications [2,3]. Recognition of this benign entity and correlation with clinical stability are essential to avoid unnecessary diagnostic tests and interventions.

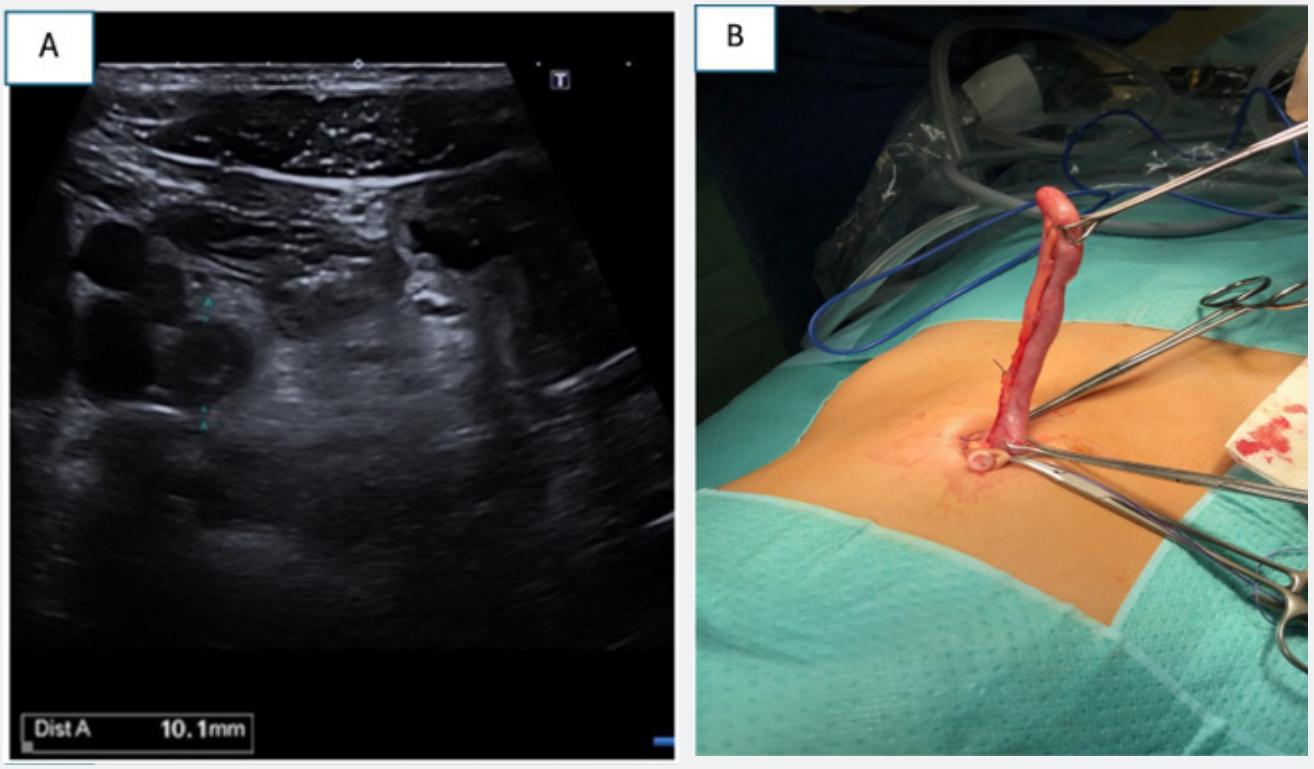

Figure 1: A. Abdominal Ultrasound demonstrating a dilated, non-compressible appendix (≈10mm) compatible with acute appendicitis. B. Intraoperative image during transumbilical laparoscopic appendectomy. The surgical procedure and postoperative course were uneventful, and the patient was discharged a few hours later.

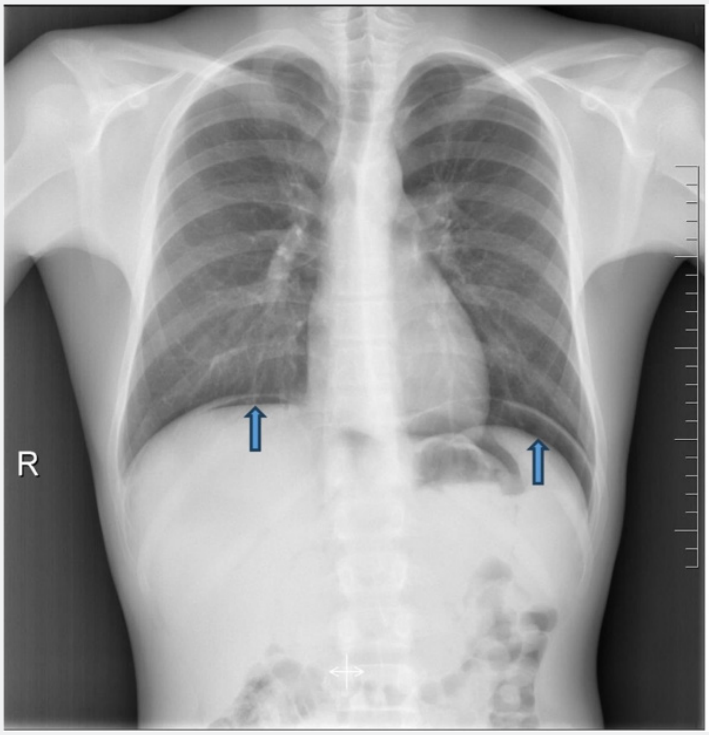

Figure 2: Chest radiograph showing subdiaphragmatic free air beneath both hemidiaphragms (arrows), consistent with residual postoperative pneumoperitoneum.

How to cite this article: Carlos F B S, Sol Angie R M, Adriana M C H, Julio C M A. Shoulder Pain After Appendectomy. JOJ Case Stud. 2026; 16(2): 555932. DOI: 10.19080/JOJCS.2026.16.555932

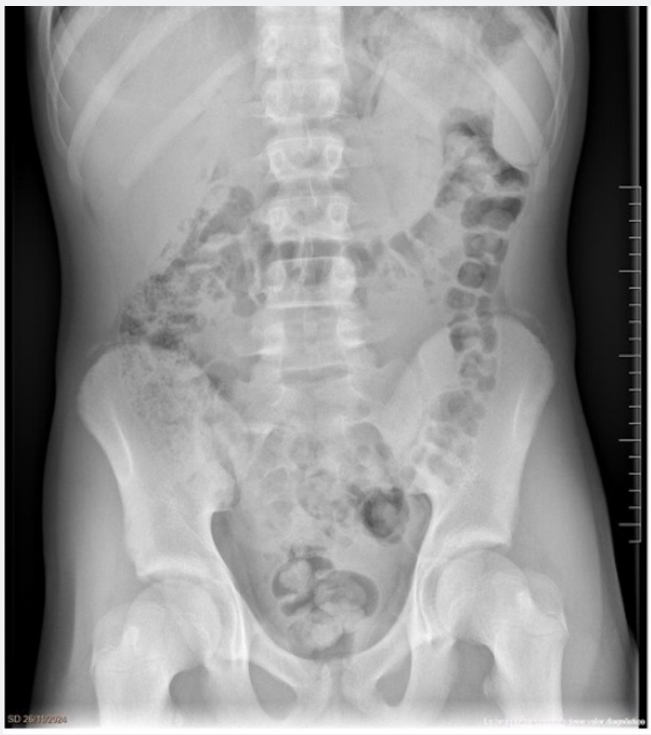

Figure 3: Abdominal radiograph showing normal bowel gas distribution.

References

1. Chapman BC, McIntosh KE, Jones EL, Wells D, Stiegmann GV, et al. (2015) Postoperative pneumoperitoneum: is it normal or pathologic? Journal of Surgical Research 197(1): 107-111.
2. Song T, Kim KH, Lee KW (2017) The Intensity of Postlaparoscopic Shoulder Pain Is Positively Correlated with the Amount of Residual Pneumoperitoneum. J Minim Invasive Gynecol 24(6): 984-989.e1.
3. Muñoz-Serrano AJ, Delgado-Miguel C, Velayos M, Fernandez KE, Delfa SB, et al. (2022) Postoperative Pneumoperitoneum in Pediatric Patients: Residual Air or Surgical Complication? A Prospective Study. J Laparoendosc Adv Surg Tech A 32(5): 576-582.

DOI: 10.19080/JOJCS.2026.16.555932

How to cite this article: Carlos F B S, Sol Angie R M, Adriana M C H, Julio C M A. Shoulder Pain After Appendectomy. JOJ Case Stud. 2026; 16(2): 555932. DOI: 10.19080/JOJCS.2026.16.555932