



E-ISSN: 2708-1508
P-ISSN: 2708-1494
IJCRS 2021; 3(2): 04-06
www.casereportsofsurgery.com
Received: 06-06-2021
Accepted: 09-07-2021

Dr. Parth Vadher
Senior Resident (Sr),
Department of General
Surgery, C.U. Shah Medical
College, Surendranagar,
Gujarat, India

Dr. Trupal Desai
Resident Doctor (R3),
Department of General
Surgery, C.U. Shah Medical
College, Surendranagar,
Gujarat, India

Dr. Jainesh Shah
Resident Doctor (R2),
Department of general surgery,
C.U. Shah Medical College,
Surendranagar, Gujarat, India

Corresponding Author:
Dr. Trupal Desai
Resident Doctor (R3),
Department of General
Surgery, C.U. Shah Medical
College, Surendranagar,
Gujarat, India

Subhepatic appendicitis a rare entity

Dr. Parthraj Vadher, Dr. Trupal Desai and Dr. Jainesh Shah

Abstract

Sub hepatic appendix and caecum is an uncommon condition. It occurs due to incomplete rotation of foetal foregut and maldescent of caecum. This condition may be mistaken for acute cholecystitis, liver abscess, duodenal perforation or right renal calculus. Appendicitis is a common surgical emergency. When present in abnormal sub hepatic location, it can pose a challenge in its diagnosis and management. Diagnosis may be delayed when acute appendicitis develops complications- appendicular rupture, perforation or localized abscess. The condition may be missed on ultrasound and CT abdomen may be inconclusive. Thus, surgeon should have a high index of suspicion in such undiagnosed right upper abdominal pain. In such cases an early diagnostic laparoscopy is suggested to avoid further complications. We are reporting a case of sub hepatic appendicitis in young male with diagnostic difficulties, need for timely surgical intervention and to avoid life threatening complications and our experience.

Keywords: Sub hepatic appendix, Maldescent caecum, incomplete rotation

Introduction

Sub hepatic appendicitis is rare condition. The incidence of sub hepatic appendicitis is found to be 0.08%. Atypical presentation of acute appendicitis may be due to varied position of tip of the appendix. The location and spread of inflammation from acute appendicitis depends on the location of the appendix. Subhepatic appendicitis usually presents with right upper abdominal pain. Due to non-perception and inadequacies in diagnosis the condition presents as appendicular rupture, localized sub hepatic abscess or sepsis. In case of appendicitis, there will be symptom of nausea, vomiting and fever. The etiopathology of acute appendicitis is usually due to obstruction of lumen. Most common organism causing appendicitis are *E. coli*, *bacteriodes fragilis*, *viridans streptococci*. Appendicitis can lead to intestinal obstruction, perforation, gangrene. Appendicitis should be managed by laparoscopic appendectomy or open appendectomy or laparotomy.

Case Report

A 35 Years old male patient came to emergency room in C U Shah medical college, Surendranagar, Gujarat with complaint of pain in epigastric region since 4 days, and associated with vomiting since 3 days and not associated with fever, burning micturition, hematuria. There was no history of trauma or smoking or alcohol intoxication. There was no any significant past history or any surgical history.

On examination patient was conscious oriented and afebrile with tachycardia. On per abdomen examination he had tenderness in epigastric and right hypochondriac region. On blood investigation there was 19300 total leucocyte count with SGPT 79.7 with other report were in normal limit. The ultrasonography of the patient was showing no abnormality on the day of admission with normal Xray abdomen standing. The patient was managed conservatively for 2 days with antibiotic and intravenous fluids accordingly to weight. Then patient was planned for diagnostic laparoscopy as the symptoms was not resolving and patient was having similar complaint.

On initial inspection caecum and appendix could not be found as those were missing in right iliac fossa. On further exploration a diagnosis of an abnormally located appendix was made, and the patient was subjected to lap converted to exploratory laparotomy, an abnormally high lying caecum was observed in the right hypochondrium; the ascending colon was absent and a redundant dilated transverse colon was seen. An early inflammatory lump involving the cecum, transverse colon, omentum and the duodenum was detected. Upon manipulation, the cecum was mobilized by incising the lateral peritoneal reflection. The appendix was located immediately medial to the ileocecal junction craniocaudally with the tip trailing superiorly in Morison's pouch.

The appendix was grossly inflamed with an unhealthy base with features of peritonitis. The terminal ileum was abnormally retroperitoneal, winding around the cecum with the ileocecal junction on the anterolateral aspect. Appendectomy was performed and followed by proper lavage and placement of drain.

The patient had an uneventful recovery and was discharged home on the fifth postoperative day. The patient was seen in the outpatient clinic, and he was in his usual state of health.



Fig 1: Intro op Sub-hepatic appendix in exploratory laprotomy

Discussion

We present a unique and challenging case of a middle aged man with sub hepatic perforated appendicitis and peritonitis. The case is unique in its diagnosis and management, which are challenging. This case report makes readers aware of rare presentation and its management. Acute appendicitis is the most common surgical emergency in children. The most common location of the appendix is retrocecal (65.3%). However, other rare positions have been reported including subhepatic, lateral pouch, mesocolic, left-sided, intraherniary and lumbar. When the appendix is located in an atypical position, patients may present with unusual clinical symptoms. This can result in a delay in the diagnosis and unfavourable complications such as sepsis, suppuration, perforation and abscess formation.

In 1955, King described the first case of subhepatic appendicitis and concluded that in such conditions the cecum remains in the subhepatic area. Subhepatic appendicitis is a rare disease and accounts for 0.08% of all cases of appendicitis with a marginally higher incidence of 1% and 3.2% in other studies.

While an ultrasound scan of the abdomen is the first radiological investigation, it has a high probability of misdiagnosis. High suspicion and caution must be maintained in atypical presentations due to reports of sub hepatic appendiceal disease misdiagnosed as liver abscess or cholecystitis. Nevertheless, a CT scan is the best modality to identify subhepatic appendicitis as it is reported to have high sensitivity (100%), specificity (95%) and accuracy (98%) in establishing the diagnosis of acute appendicitis.

In a sub hepatic appendix, a conventional Lanz incision in the right lower quadrant may not be suitable to remove the appendix. In our patient's case, we performed a midline laparotomy due to the sub hepatic location of the appendix and the possibility of retrocaecal, dense adhesion or fibrosis and perforation, which would make a laparoscopic approach an unsafe option, in addition to the fact that open access would provide better tactile input and direct access to the appendix. Laparoscopy could also be an option in patients who are clinically stable and not peritonitic in a similar situation for its versatility and diagnostic and therapeutic ability.

Conclusion

Acute subhepatic appendicitis is a unique and rare presentation, making its diagnosis and management challenging. Its unusual location may delay and complicate the underlying pathology. However, a high degree of clinical suspicion and superior imaging modalities like CT scan of the abdomen can aid in the diagnosis and appropriate timely intervention.

References

1. Ascending retrocecal appendicitis: clinical and computed tomographic findings. Kim S, Lim HK, Lee JY, Lee J, Kim MJ, Lee SJ. *J Comput Assist Tomogr* 2006;30:772-776. [PubMed] [Google Scholar]
2. McAninch SA, Essenburg A. Pediatric subhepatic appendicitis with elevated lipase. *Am J Emerg Med* 2019;37:174. [PubMed] [Google Scholar]
3. Aneiros Castro B, Cano Novillo I, García Vázquez A, Yuste García P, Ferrero Herrero E, Gómez Fraile A. Is the laparoscopic approach appropriate for pediatric subhepatic appendicitis? *Asian J Endosc Surg* 2018;11:362-365. [PubMed] [Google Scholar]
4. Appendicular abscess masquerading as a liver abscess: value of laparoscopy in diagnosis and management. Rangarajan M, Palanivelu C, Senthilkumar R, Madankumar M. <http://ispub.com/IJTWM/4/1/11622> *Intern J Surg* 2006;4:1-4. [Google Scholar]
5. Laparoscopic appendectomy for appendicitis in uncommon situations: the advantages of a tailored approach. Palanivelu C, Rangarajan M, John SJ, Senthilkumar R, Madhankumar MV. <https://www.ncbi.nlm.nih.gov/pubmed/17657381>. *Singapore Med J* 2007;48:737-740. [PubMed] [Google Scholar]
6. Subhepatic appendicitis: A diagnostic dilemma. Ball WR, Privitera A. *BMJ Case Rep* 2013;2013:0. [PMC free article] [PubMed] [Google Scholar]
7. Subhepatic appendicitis. King A. *AMA Arch Surg* 1955;71:265-267. [PubMed] [Google Scholar]
8. Challenges in the management of subhepatic acute appendicitis in the emergency setting. Shirah BH, Shirah HA, Alhaidari WA, Abdulbagi OE. http://www.ijcr.com/abstract.php?article_id=314 *Int J Cur Res Rev* 2016;8:47-52. [Google Scholar]
9. Duodenal obstruction caused by acute appendicitis with intestinal malrotation in a child. Biçer Ş, Celik A. *Am J Case Rep.* 2015;16:574-576. [PMC free article] [PubMed] [Google Scholar]
10. Subhepatic appendicitis with subdiaphragmatic abscess in a pediatric patient without intestinal malrotation: case report. Galván-Montaña A, Flores-Nava G,

- Suárez-Roa Mde L, Salazar-Herrera MC, Lavalle-Villalobos A.
<https://www.ncbi.nlm.nih.gov/pubmed/20226132>. *Cir Cir*. 2010;78:79-81. [PubMed] [Google Scholar]
11. Castro BA, Novillo IC, Vázquez AG, Garcia PY, Herrero EF, Fraile AG. Impact of the appendiceal position on the diagnosis and treatment of pediatric appendicitis. *Rev Paul Pediatr*. 2019;37:161-165. [PMC free article] [PubMed] [Google Scholar]
 12. Patel NR, Lakshman S, Hays TV, Thomas E. Subhepatic appendix with fecalith mimicking acute cholecystitis with gallstone. *J Clin Ultrasound*. 1996;24:45-47. [PubMed] [Google Scholar]
 13. Chalazonitis AN, Tzovara I, Sammouti E, *et al*. CT in appendicitis. <https://www.ncbi.nlm.nih.gov/pubmed/18306140>. *Diagn Interv Radiol*. 2008;14:19-25. [PubMed] [Google Scholar]
 14. Esposito C, Calvo AI, Castagnetti M, Alicchio F, Suarez C, Giurin I, *et al*. Open versus laparoscopic appendectomy in the pediatric population: a literature review and analysis of complications. *J Laparoendosc Adv Surg Tech*. 2012;22:834-839. [PubMed] [Google Scholar]