A case report of pneumo-retro-peritoneum: An unusual presentation of ischio-rectal abscess

Usman Ismat Butt a, Samiullah Bhatti a,*, Abdul Wadood a, Usman Ali Rehman a, Shabbar Hussain Changazi a, Kashif Malik a, Shah Fahad a, Anila Chughtai b, Nauman Arif Jadoon c, Mahmood Ayyaz a

a Surgical Unit – II, Services Hospital, Lahore, Pakistan
b Chughtai Lab Lahore, Lahore, Pakistan
c Center for Biomedical Research, Lahore, Pakistan

HIGHLIGHTS

- Ischio-rectal abscess can present with abdominal symptoms of peritonism and peritonitis.
- Actual cause of these symptoms of peritonitis could be retro-peritoneal air which can be managed simply by incision and drainage of abscess alone.
- Vigilance on the part of treating surgeon/physician can avoid a negative laparotomy.

ARTICLE INFO

Article history:
Received 6 January 2017
Received in revised form
13 June 2017
Accepted 14 June 2017

Keywords:
Pneumo-retroperitonium
Ischio-rectal abscess
Perianal abscess
CT scan

ABSTRACT

Introduction: Ano-rectal abscesses are common. They however usually do not present with abdominal symptoms. CT although useful is not routinely carried out. Finding of Pneumo-retro-peritonium with ischio-rectal abscess is rare.

Case presentation: We present the case of a diabetic gentleman who presented with abdominal pain and distension and was found to have ischio-rectal abscess on perianal examination. Although initially suspected to have acute abdomen due to perforated viscus, CT scan revealed pneumo-retro-peritonium which appeared to arise due to the abscess. Patient underwent incision and drainage of the abscess followed by serial debridement. He made a complete recovery.

Conclusion: Abdominal symptoms are rare in ischio-rectal abscess, but they must be kept in mind. Proper diagnosis may avoid a negative laparotomy.

© 2017 The Author(s). Published by Elsevier Ltd on behalf of IJS Publishing Group Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

1. Introduction

The work has been reported in line with the SCARE criteria [1] which is the systematic way of presenting un-usual cases. Infection in the crypto-glandular epithelium lining the anal canal is the precursor to the ano-rectal abscess. The sphincters act as a barrier. Once infection spreads to the inter-sphincter space it can easily gain access to the adjacent spaces [2].

Anorectal abscesses are classified according to their anatomic location into perianal, ischio-rectal, inter-sphincter and supralevator types [3]. Supralevator abscesses are the least common. They result either as upward spread of inter-sphincter abscess or downward spread of suppurative abdominal process.

The peak incidence of anorectal abscesses is in the third and fourth decades of life [3]. Men are affected more frequently than women [4]. Radiological investigations are not usually deemed necessary but they are quiet helpful in cases of supralevator abscess [5,6].

Almost all cases present with complaints of pain, chills, discomfort and fever. Abdominal symptoms are rare. The treatment of ano-rectal abscess is incision and drainage of the purulent collection after stabilization of the patient [7,8].

http://dx.doi.org/10.1016/j.amsu.2017.06.023
2049-0801/© 2017 The Author(s). Published by Elsevier Ltd on behalf of IJS Publishing Group Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).
Pneumo-retro-peritoneum is rare. Usual causes include duodenal perforation, post-operative, emphysematous pyelonephritis, colonic perforations, iatrogenic following endoscopy and trauma [9].

This case report presents a case of ano-rectal abscess which presented with constipation and abdominal pain mimicking intestinal obstruction. CT scan showed the presence of retroperitoneal air. Patient settled with incision and drainage of the abscess.

2. Case presentation

A 58 year old gentleman with history of uncontrolled diabetes mellitus for 15 years presented to the emergency with complains of abdominal pain, constipation and distension for the past two days and pain in the perianal area for the past six days. It was associated with fever, rigors and chills.

On examination he had pulse of 100/min, was febrile with temperature 101°F. Abdomen was distended with absent bowel sounds. Digital rectal examination revealed marked bogginess and tenderness, erythema and fluctuation around the anal opening with raised temperature. Keeping in view the age of the patient a suspicion of sigmoid tumor perforation leading to abscess was made. Patient had no previous history of fistula-in-ano or endoscopic examination.

Initial resuscitation was started with intra-venous fluids, antibiotics and anti-pyretic. Meanwhile initial workup was done which included complete blood count, abdominal x-ray and a CT scan abdomen. White blood cell count was 17,000 per cubic mm and X-ray Abdomen showed multiple air fluid levels.

CT Scan Abdomen revealed no growth or gut pathology however there was a large quantity of retro-peritoneal air extending almost up to the diaphragm as well as into the sub-cutaneous plane (Fig. 1). Considering the clinical picture and the radiological findings the diagnosis of an ischio-rectal abscess leading to extension and retro-peritoneal air was made (Fig. 2).

The patient underwent incision and drainage of the ischio-rectal abscess which was found to be horse shoe shaped and extending on both sides of the anal canal. Almost 500 ml of pus and a large quantity of foul smelling air was evacuated with underlying necrotic fat and tissue. Two large corrugated rubber drains were placed on each side. Pus swabs demonstrated E. coli, Pseudomonas and Gram positive spore bearing rods.

Patient further underwent debridement of the underlying tissue twice in the next 7 days. Mean-while he was continued Intravenous antibiotics (ceftriaxone and metronidazole), Sitz bath thrice a day and wound dressing with local anti-biotic and analgesic creams.

By the 10th post op day the wounds of the patient were healthy, his leukocytosis had settled, bowel habit returned to normal and he was discharged.

He was advised a colonoscopy which revealed no pathology. Patient is currently on follow-up and 6 months later the patient is in good health with the wounds healed.

3. Discussion

Presentation with abdominal symptoms is rare. As such we initially didn’t suspect the diagnosis. It was only when we undertook CT-Scan of the patient did we discover the diagnosis incidentally. The patient then settled with incision and drainage. Despite our extensive literature review we were unable to find a previous report documenting this finding in ischio-rectal abscess. There have been a few case reports which have documented unusual presentation of ischio-rectal abscess [10,11,12].

Ischio-rectal abscesses usually present acutely and require emergency incision and drainage, however, judicious imaging before intervention is required when such abscess are associated with unusual symptoms.

The diagnosis of ischio-rectal abscess presenting with
Abdominal symptoms should be kept in mind especially in immune-compromised and elderly patients as this may result in negative laparotomy with disastrous results. As CT scan is not routinely carried out in ischio-rectal abscess, the finding of retro-peritoneal gas may be higher than noted. Although posterior duodenal perforation may present with similar radiological finding but the patient did not have any history of retrosternal burning, dyspepsia, bloating or NSAID intake in the past. Due to lack of availability of endoscope in the emergency department endoscopy was not performed. The patient recovered well after treatment of ischio rectal abscess.

4. Conclusion

We can avoid a negative laparotomy by keeping in mind the unusual presentation of ischio-rectal abscess with retro-peritoneal air.

Ethical approval

It is a case report and ethical approval not required.

Sources of funding

No funding agency is involved and funds for publication will be shared by all the authors own pockets collectively.

Author contribution

1. Dr Samiullah bhatti and Dr Usman Ismat Butt made substantial contributions to conception and design of data.
2. Dr Abdul Wadood was involved directly in acquiring data from the patient.
3. Dr Shabbar Hussain Changezi has been involved in revising it critically for important intellectual content.
4. Dr Kashif Malik and Dr Anila Chughtai have been involved in drafting the manuscript.
5. Dr. Shah Fahad and Dr Nauman A. jadoon was involved in the editing and revising the manuscript.
6. Dr Mahmood Ayyaz Khan has given final approval of the version to be published.

Conflicts of interest

There are no financial and non-financial competing interests involved with this case report.

Guarantor

Dr. Samiullah Bhatti (1st and corresponding author) accepts full responsibility for the work and/or the conduct of the study, has access to the data, and controls the decision to publish.

Research registration unique identifying number (UIN)

This is a case report and research registration number not required.

Consent for publication

We have taken permission from the patient about the publication of this case report. And it can be provided on demand by the journal.

References

[1] R.A. Agha, A.J. Fowler, A. Saetta, I. Barai, S. Rajmohan, D.P. Orgill, for the SCARE Group, The SCARE Statement: consensus-based surgical case report guidelines, Int. J. Surg. 20 (2016) 34 (2016) 180–186.
[2] M.H. Whiteford, Perianal abscess/fistula disease, Clin. Colon Rectal Surg. 20 (2) (2007 May) 102–109.
[3] J.L. Pfenninger, G.G. Zainea, Common anorectal conditions: Part II. Lesions, Am. Fam. Physician 64 (1) (2001 Jul 1) 77–88.
[4] J.M. Beard, Osborn J. Anorectal Abscess, R.E. Rakel, D.P. Rakel (Eds.), Textbook of Family Medicine, eighth ed., Saunders, Philadelphia, Pa, 2011.
[5] D. Chandwani, R. Shih, D. Cochrane, Bedside emergency ultrasonography in the evaluation of a perirectal abscess, Am. J. Emerg. Med. 22 (4) (2004 Jul) 315.
[6] T.L. Tio, C.J. Mulder, O.B. Wijers, et al., Endosonography of peri-anal and peri-colorectal fistula and/or abscess in Crohn’s disease, Gastrointest. Endosc. 36 (4) (1990 Jul-Aug) 331–336.
[7] M.L. Corman, Colon and Rectal Surgery, fourth ed., Lippincott-Raven, Philadelphia, Pa, 1998, pp. 224–271.
[8] R.R. Dozois, J.R. Nichols, Surgery of the Colon and Rectum, Churchill Livingstone, New York, NY, 1997, pp. 255–284.
[9] A. Pinto, C. Muiz, G. Ruggiero, Pneumoretroperitoneum: imaging findings, in: L. Romano, A. Pinto (Eds.), Imaging of Alimentary Tract Perforation, Springer, New York, 2015, pp. 85–90.
[10] M. Weizberg, B.P. Gillett, R.H. Sinert, Penile discharge as a presentation of perirectal abscess, J. Emerg. Med. 34 (1) (2008 Jan) 45–47.
[11] J. Smereck, M. Ybarra, Acute hip pain and inability to ambulate: a rare presentation for perirectal abscess, Am. J. Emerg. Med. 29 (3) (2011 Mar), 356.e1–3.
[12] D.T. Bennetsen, Perirectal abscess after accidental toothpick ingestion, J. Emerg. Med. 34 (2) (2008 Feb) 203–204.