



A CASE PRESENTATION OF ONE OF THE APPENDICULAR ATRESSIA PUBLISHED EVER BEFORE.

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ABSTRACT

Acute appendicitis is the most common acute surgical condition; making appendectomy the most commonly performed emergency surgical procedure in the world. Anomalies of the appendix are relatively uncommon. However, their presence may alter the course of diagnosis and the surgical treatment provided with post operative management. We hereby present the case of a 15 year-old male who had the symptoms of acute appendicitis like pain vomiting and temperature. He was then undergone for emergency open appendectomy. During the procedure, the findings of a 8.5 cm long appendix was noted. The base of the appendix was attached to the caecum with fibrous strands; however there was complete mucosal discontinuity between the base and the remaining portion of the appendix. Considering the rarity of this finding we feel this could be congenital atresia.

KEYWORDS: post operative During the procedure, atresia.

INTRODUCTION

Acute appendicitis is the most common acute surgical condition; making appendectomy the most frequently performed surgery in emergency setting. Timely management may subside this condition or this is if not treated properly it may convert into lump formation or perforation which might develop fatal situation for patient's life. The appendix, considered a vestigial organ, is retrocecal or retrocolic in most of the cases. Other documented positions include the pelvic, subcecal, pre-ileal, splenic and ectopic positions, enlisted here in decreasing order of frequency. Appendiceal anomalies are uncommon; however, they may interfere with diagnosis, surgical treatment and post operative management. The appendicular atresia is uncommon among all congenital anomalies of the appendix.

As per our survey till date only four cases are reported of appendicular atresia and this will be the fifth case. According First in Woywodt A et al. in 1998 reported the first case of appendicular atresia, which was associated with multiple jejunal atresias in a 4-year old boy with intestinal obstruction. Nichat et al., in 2009, reported the second case of appendicular atresia, in which the term "double-blind" appendix was used. However, the sequence of mucosal discontinuity of appendix was different from our case. In the case reported by Nichat et al. the sequence was caecum-fibrous strand (i.e. the

atretic portion)-appendix, while in our case the sequence was caecum- base of appendix- fibrous strand-remaining of appendix. Yaylak F et al. in 2013 reported another case of appendicular atresia in a 59-year old male with acute appendicitis. The appendix was approximately 10 cm proximal to ileocecal valve. The tip of appendix was inflamed, while the lumen had ended blindly without a connection to the caecum, but supplied by ileocecal artery. Irfan Masood, Zain Majid, Ali Rafiq, Saba Fatima Ali, Osama Bin Zia Siddiqui reported the case in 2014 and published the same in 2015. In this case there was lump formation and it was treated conservatively and interval appendectomy was done. This fifth case was operated by our surgical team at Dr. G.D. Pol Foundations YMT Ayurved College and Hospital found one of the appendicular atresia published till date.

Patient and observation

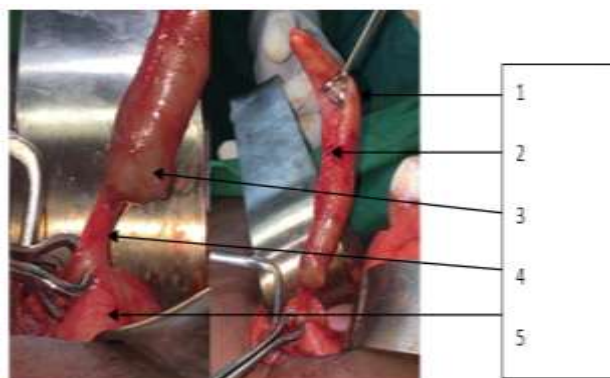
A 15 year old male presented to the outpatient department of surgery through the emergency department with active complaints of pain in the right iliac fossa for 4 to 5 days. It was acute in onset, moderate to severe in intensity and continuous in nature. It was associated with anorexia, nausea and one episode vomiting. The patient was also complaining of low-grade fever without rigors or chills. On examination, the patient was oriented to time, place and person and had a normal blood pressure but was having tachycardia with

pulse rate of 100/min. Abdomen was soft, with rebound tenderness in RIF rest of the abdominal and systemic examinations were normal. Hematologic investigations showed hemoglobin of 16.3 g/dL, total leukocyte count (TLC) of $11,200 \times 10^9/L$ and a 2.68lacs/cumm platelet count. Serum creatinin 1.3mg/dl and urinalysis were within normal limits and random blood sugar was 82.4mg/dl, CT and BT were 1 min 45sec. and 1min. 10sec. respectively. Ultrasound abdomen (USG abdomen) showed findings were acute inflamed appendix with 12mm in diameter 8cm long dilated tubular structure with surrounding inflamed structures.

The patient underwent open appendicectomy with intra-operative findings of an approximately 8.5cm long appendix. The base of appendix was attached to the caecum but there was complete luminal discontinuity between the caecum and the appendix. The separated blind-ended parts were connected to each other by fibrous strands. Mesoappendix containing appendicular artery was visible anchoring the appendix to cecum. Mesoappendix was tied and divided and appendix was removed. Macroscopically, no fecolith or mass were identified on either ends. Rest of bowel, mesentery, and pelvic organs were normal. The sample was sent for histopathological examination, which showed chronic appendicitis with no granuloma, carcinoid, or malignancy. The patient was discharged with no immediate or late post-operative complications.

Appendicular atresia

1. Appendix
2. Mesoappendix dissected
3. Base of appendix, ,
4. Fibrous strand i.e. the atretic portion connecting the base with the remaining of appendix
5. Caecum,



DISCUSSION

In developmental process appendix first becomes visible in the eight week as a protuberance of the caecum. During this developmental period the growth rate of caecum exceeds that of the appendix and displaying the appendix towards the ileocaecal junction. Usually base of the appendix to the caecum remains constant where as tip can be variable to positions. Some triggers may play

some role during this period for such luminal discontinuity giving rise to such anomaly. Such cases gives picture of obstructive appendicitis due double blind end and hence increases the chances for perforation creating extreme emergency.

Developmental anomalies of the vermiform appendix can hence complicate the clinical and surgical presentations of patients presenting with acute abdomen. And these are extremely rare. Duplication of appendix has an incidence of 0.004%, while the incidence of appendicular diverticulosis found in appendectomy specimens ranges from 0.004% to 2.1%. Congenital absence of appendix i.e. appendicular agenesis has a reported incidence of 1 in 100,000 cases. Others include horse-shoe appendix, malrotation, and a single reported case of triplication of appendix. Thus, meticulous preoperative evaluation and surgical exploration of the abdominal cavity is essential in patients with atypical presentations. Thorough investigations are important in such cases like radiological findings

CONCLUSION

Hence, our case is only the fifth case we have noticed of appendicular atresia and it can be considered as double blind appendix. We believe that it is a valuable addition to this rare pool of developmental anomalies.

Competing interests

The authors declare no competing interests.

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