

## Isolated Transection Of Appendix Following Blunt Abdominal Trauma:A Rare Entity

Dessai Govindraj Shripad<sup>1</sup>, Wasnik Kamlesh<sup>2</sup>, Audi Pandarinath<sup>3</sup>, Amonkar D<sup>4</sup>, Noronha FP<sup>5</sup>, Desai Shaunak<sup>6</sup>

<sup>1</sup>. Department of General Surgery,Goa Medical College,India

<sup>2</sup>. Department of General Surgery,Goa Medical College,India

<sup>3</sup>. Department of General Surgery,Goa Medical College,India

<sup>4</sup>. Department of General Surgery,Goa Medical College,India

<sup>5</sup>. Department of General Surgery,Goa Medical College,India

<sup>6</sup>. Department of General Surgery,Goa Medical College,India

Corresponding Author: Dessai Govindraj Shripad

---

**Abstract:-**Trauma has been attributed as cause for appendicitis in many cases,however isolated transection of appendix following blunt abdominal trauma is almost unheard of. We report a case of young boy who developed transection of appendix with peritonitis following cycle handle bar injury.In view of abdominal findings and CT suggestive of pneumoperitoneum,patient was taken for exploratory laparotomy.Patient had peritonitis secondary to transection of appendix leaving behind 3cm of appendiceal stump.Stump appendectomy and lavage was done and patient had uneventful post-operative period. Hence, though rare blunt abdominal trauma may present with isolated appendiceal injury.

**Keywords:-**appendiceal transection,blunt abdominal trauma

---

Date of Submission: 26-01-2019

Date of acceptance: 09-02-2019

---

### I. Introduction

As a surgeon ,we encounter numerous young adults in emergency department presenting with acute appendicitis and blunt abdominal trauma.There have been many cases of appendicitis who have been linked to trauma as etiology, however appendiceal transection following blunt abdominal trauma is quite rare; more so its presentation as isolated injury is even rarer.(1) The first to document such transection were Houdini's biographers.Houdini was great Italian escapologist who died of perforated appendicitis following a punch on his abdomen by amateur boxer in 1926.(2) We report a case of a young boy who presented to our emergency department with complete transection of appendix at the base following cycle handle bar blunt injury.

### II. Case Report

This is a case of 13 year old male,who suffered a blunt abdomen trauma with a bicycle handle bar.He was riding a bicycle and then had an accidental fall over bicycle handle with a blunt injury to right iliac fossa.Patient presented to casualty 2 days later with history of pain in right lower abdomen which was continuous and dull aching. He also had a episode of fever not associated with chills and rigors.On examination ,he had tachycardia of 112/min.BP was stable. Per abdomen, there was generalized tenderness and guarding in right iliac fossa. Contusion was present in right iliac fossa of 3 cm diameter indicating an imprint of cycle handle bar. In view of abdominal signs (generalised tenderness with guarding in right iliac fossa) and plane CT scan abdomen showing free intraperitoneal air, the decision of exploratory laprotomy was taken.

**OT findings:-**(Fig 1)revealed isolated injury to appendix.There was complete transection of appendix at junction of proximal and middle third of appendix leaving behind 3cm stump.There was pus 100cc and flakes in right paracolic gutter and pelvis mainly.Stump appendectomy with lavage was done.Rest of bowel did not show any perforation and liver spleen was normal.Following this patient recovered without any complication & was discharged on 7th post operative day.

**Investigations:-**Hemoglobin 13.5.Total count 10300.Urine routine :-normal.Differential count:- Neutrophils-75 Lymphocytes-15 Monocytes-4 Esinophils-6

Ultrasound abdomen-minimal free fluid in between bowel loops. X-ray abdomen erect-normal.CT abdomen-pneumoperitoneum



**Figure 1:-**Intra-operative finding revealing the pouting out mucosa with appendiceal transection and flakes.



**Figure 2:-**The stump of appendix that was left behind after transection

### III. Discussion

The acute appendicitis is one of the common surgical cause of acute abdomen. Obstructive causes like fecolith, foreignbody,mucus plug and non obstructive causes involving bacterial invasion of lymphoid tissue are common etiologies of acute appendicitis.(3)

There have been only few cases reported of traumatic transection or rupture of appendix,however appendicitis following trauma have been reported multiple times.(1)

Serour and al have claimed that direct appendiceal injury is associated with other intrabdominal organ injuries. Appendix being mobile and small organ,is rarely affected by direct trauma(4)

Pathophysiology of appendicular injury following trauma is uncertain but likely mechanisms are direct compression,oblique crush injury, shearing injury or from indirect obstruction of the appendiceal lumen by an ileocaecal hematoma or traumatic impaction of stool into the appendix.(5)

In 1926 trauma was seen as a possible etiological factor of acute appendicitis with death of Houdini.Houdini used to invite blows on his abdomen to demonstrate his remarkable strength. Following one such punch,he developed severe pain. He neglected it considering it to be a torn muscle. Eventually he was operated by surgeons and was found to have peritonitis with gangrenous appendix.This was first reported case of ruptured appendix following trauma which led to death of great escapologist and illusionist.(2)

Denis reported blunt rupture of appendix in 1 of 38 injured patients restrained during automobile accidents.(6)

In 1956, Gatewood and Russum reported a case of complete transection of appendix following blunt abdominal trauma. The patient,a 39 year old woman involved in a motor vehicle collision,complained of abdominal pain after 3 hours of observation.(7).In 2013, Moslemi et al.(8) reported a 13 year old boy with a history of bicycle handle bar injury. In less than 6 hours, he developed generalized peritonitis.

In our case there were no symptoms prior to trauma and hence trauma appears to be definitive cause.Also mucosa was pouting out supporting the traumatic etiology.Isolated transection of appendix at the junction of middle and proximal thirds with peritonitis hasn't been reported previously in literature. Though rare,such injuries should be considered in young patients with blunt abdominal trauma.We should also note that appendicitis must be considered as differential diagnosis in any patient who presents with blunt abdominal trauma.(5)

### References

- [1]. Appendiceal transection associated with seat belt restrain;Seung Je co etal;Annsurg Treat Res,v 91(2);2016 Aug 93-95
- [2]. Injury to appendix after blunt abdominal trauma DFM Thomas,BMJPg 474,12 August 1978
- [3]. The teumatic appendicitis:- A case report and literature review-Bouassia et al world journal of emergency surgery 2013 8:31.
- [4]. SerourF,EfratiY,KlinB,etal:Acut appendicitis following abdominal trauma.ArchSurg 1996,131:785-786
- [5]. Ann J Emerg Med.2017 Sep;35(9):1386.e5-1386.e6.Appendicitis following blunt abdominal trauma.Cobb T.
- [6]. Denis R,AllardM,AtlasH,Farkouh E. Changing trends with abdominal injury in seatbelt wearers.J trauma.1983;23:1007-1008.
- [7]. GatewoodJW,RussumWJ.Injuries to the appendix secondary to blunt trauma.Ann J Surg.1956;91:558-560
- [8]. Co-incident of acute appendicitis and appendiceal transection after blunt abdominal trauma:-A cae report .Sam Moslemi.IJMS vol38 No.4 December 2013

**Acknowledgment**

We are sincerely thankful to residents and staff of Department of Surgery, anaesthesiology and radiology of Goa Medical College, Bambolim Goa for helping us in treating the patient efficiently and reporting this rare case.

Dessai Govindraj Shripad. "Isolated Transection Of Appendix Following Blunt Abdominal Trauma:A Rare Entity." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 18, no. 2, 2019, pp 12-14.