*IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*
*e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 15, Issue 2 Ver. VIII (Feb. 2016), PP 89-91*
*www.iosrjournals.org*

# Traumatic Evisceration of Gastric Tumour: A Rare Case Report

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***Abstract****: Evisceration of abdominal content is common in penetrating injury. It is extremely rare in blunt trauma abdomen. This is a case report of a59 year old female involved in MVA in which her gastric tumour was eviscerated along with parts of small and large bowel. She had partial gastrectomy upon exploration ,and successful primary repair of her abdominal wall rupture.*
***Key words****: blunt abdominal trauma, evisceration, gastrectomy, repair*

## I. Introduction

Abdominal organ evisceration secondary to blunt trauma is extremely rare [1]. An incidence of 1 in 40,000 has been reported in trauma admissions [2]. The mechanism of evisceration following blunt trauma is not clearly understood. It has been explained on the basis of sudden increase in intra-abdominal pressure combined with impact of shearing force on the abdominal wall. This results in disruption of abdominal wall muscles, fascia and skin depending on the force of impact [3] We report a case of traumatic evisceration of gastric tumour with successful outcome.

## II. Case Report

A 59 year old female presented at the ER after MVA. She was riding a motorcycle and hit by a moving car . The lady was thrown away from her bike onto a divider in the middle of the road. She sustained multiple injuries but was conscious, alert with stable vital signs. There was a 15 cm transverse wound in the upper abdomen over the epigastrium through which the stomach, transverse colon and parts of small bowel were eviscerated (Fig 1).

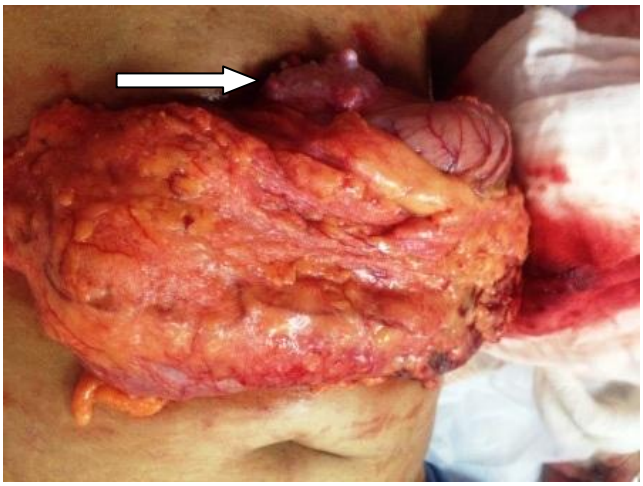

Figure 1.Photograph on admission to ER showingeviscerated stomach with tumour (arrow), transverse colon and small bowel loops covered by omentum

The part of the stomach was a tumour mass which had been previously investigated and the diagnosis was presumed to be GIST after complete work up.(Fig 2) She had been advised surgery which was refused due to familial concerns. She sustained open fracture in her left tibia and had phalangeal fractures in both hands. She was a known diabetic on oral medications.

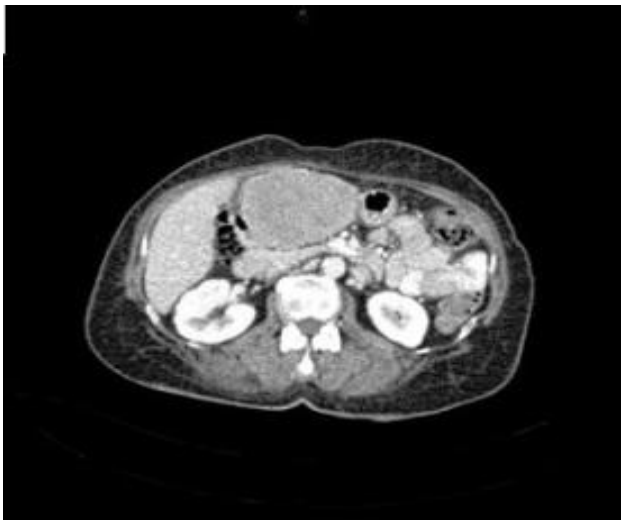

Figure 2.CECT Abdomen during previous admission showing homogeneous well defined tumour in the antrum

After stabilisation and necessary work up , a formal consent was taken to proceed with gastric tumour surgery if possible. Abdomen was explored through the same wound after extending it on both sides. There were 2 jejunal perforations but no other organ injury . She had lower partial gastrectomy and resection anastomosis for the small bowel perforations . Abdomen was closed in layers .Orthopaedic team managed her accordingly. She had uneventful recovery except for minor SSI which was later dealt with by secondary sutures. HPE of the tumour was consistent with Schwannoma ( Fig 3A and 3B) She was seen at follow up in the outpatient clinic and is doing well 3 months after discharge from the hospital

Figure 3A. Gross appearance of excised tumor

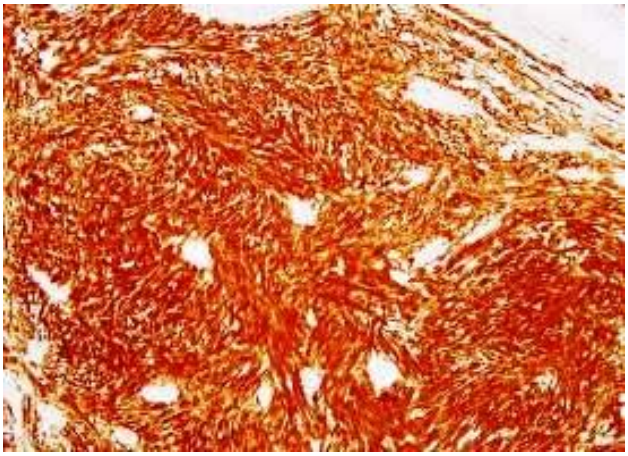

Figure 3B. Immunohistology-strongly positive for S100 confirming Schwannoma

## III. Discussion

Traumatic evisceration of intra-abdominal organ is common with penetrating injury like stab wound[4]. However complete abdominal wall disruption in blunt trauma is very rare and sometimes challenging. Our case was compounded by evisceration of a known large gastric tumour.

The impact caused by the collision and shearing forces on the abdominal wall are thought to be responsible for the injury[3] . All 3 cases reported by Hardcastle were involved in MVA[2]. Our patient was thrown off her bike onto the road divider. It is probable that the abdominal wall disrupted with the impact of the trauma, although other mechanisms are possible. Knott reported evisceration injury in a patient with pre-existing incisional hernia[5]. According to Choi, evisceration occurs at the anatomical weak points of the abdominal wall like lateral rectus, lower abdomen, and inguinal region[6]. Large intra-abdominal tumour may have played a part in evisceration in our case .

Dennis has graded traumatic abdominal wall hernia on the basis of CT scan analysis. The grades are I to VI; last one being open herniation or evisceration. In his seriesof 1549 patients with blunt abdominal injury , there was no case of grade VI injury , providing evidence for the rarity of such a case[7].

Whatever the associated injury,the literature supports immediate surgical exploration for most abdominal wall hernias. There is no consensus regarding the approach to repair [6]. Damchen recommended individualistic approach to repair of the defect[8]. In our patient , there was no loss of soft tissue and we extended the wound on either side and successfully repaired it.

Gastric schwannomas account for 0.2% of all gastric tumours . They are benign tumours with excellent prognosis [9]. They are often misdiagnosed as GIST due to similarities in presentation and pathology [10]. Our patient though fated to suffer from a major MVA, was fortunate to have gastric schwannoma ,which was initially thought to be GIST. Yoon has reported a similar case where initial preoperative diagnosis was GIST but later confirmed to be schwannoma [9].

## IV. Conclusion

Evisceration injury following blunt trauma of the abdomen is extremely rare . Emergent exploration and repair should be done to avoid further complication. Our patient had a gastric tumour which eviscerated and later confirmed asschwannoma which is also a rare tumour of the stomach . This report may be the first case in the literature.

**Consent**: has been taken for the publication of this report including images and photographs, and a copy will be made available on the Editors request.

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