Traumatic Jejunal hematoma in childhood—A case report and review of literature

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ABSTRACT

INTRODUCTION: Intramural jejunal hematoma is a very rare condition with only few cases reported in the literature. It rarely occurs spontaneously, and is mostly seen in hemophilic patients and is also associated with abdominal trauma. It occurs more commonly in children than in adults and can present with features of intestinal obstruction.

CASE PRESENTATION: A 10 year old boy presented with features of intestinal obstruction. He sustained a blunt abdominal trauma two days prior to presentation. Abdominal computed tomography (CT) revealed jejunal hematoma with signs of complete obstruction. A trial of non-operative management failed and eventually he was managed surgically.

DISCUSSION: Blunt trauma to the abdomen is the principle cause of jejunal hematoma. The trauma in majority of cases is trivial and usually the patients present late. The symptoms range from mild abdominal pain to intestinal obstruction with acute abdomen. A trial of conservative management is justifiable in stable patient. If no clinical improvement surgical intervention is indicated.

CONCLUSION: Intramural jejunal hematoma after blunt abdominal trauma is seen predominately in pediatric age group and can present as intestinal obstruction. It should be suspected when a child presents with intestinal obstruction and a concurrent history of blunt abdominal trauma. The mainstay of treatment is surgical intervention. Because of the rarity of this disease, the role of conservative therapy is undefined.

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duodenojejunal junction with proximal jejunal dilatation and distal bowel loops collapse (Fig. 3). Resection and anastomosis of the involved segment was done which was subsequently sent for histopathologic examination of the specimen, the result of which showed submucosal hematoma with marked attenuation of muscularis propria. Postoperative recovery was uneventful, oral feeding was started and the patient was discharged on postoperative day 5.

3. Discussion

The small intestine particularly the duodenum is vulnerable to injury after blunt trauma due to its relatively fixed position anterior to the vertebral body and the rich submucosal and subserosal vascular plexus, with incidence of 2 to 3% of blunt abdominal trauma in children [2]. Jejunal mural hematomas have been described mainly after trauma but are sometimes related to underlying coagulopathies, as in patients with liver cirrhosis, patients using anticoagulant agents, and in hemophilia [3].

Blunt abdominal trauma at childhood and adolescence ages differ in that the abdominal musculature has not developed its maximum strength and thickness, the lower rib cage margin is free with high flexibility and the anteroposterior depth of the abdominal cavity is smaller than in adults accounting for the increased risk of jejunal hematoma [4].

Most patients do not present immediately because in the majority, the blow to the abdomen is mild and of little importance. They were able to continue normal activities for hours or even days after the injury. The delay between the injury and onset of obstructive symptoms is explained by the gradual increase in the hematoma due to progression of bleeding and absorption of fluids secondary to the increased osmolarity [5].

The presentation of patients who have intramural small-bowel hematoma can vary from mild and vague abdominal pain to features of intestinal obstruction with severe abdominal pain and copious vomiting. Gastrointestinal bleeding is a relatively uncommon symptom, and when it occurs, is usually of a minor degree. Abdominal examination might reveal bruises at the site of the blow, tenderness, guarding and palpable mass. However, due to the tenderness the mass might not be readily palpable. Abdominal CT is the investigation of choice for obtaining a correct diagnosis. Signs such as circumferential wall thickening, intramural hyperdensity, luminal narrowing, and intestinal obstruction are diagnostic.

The main treatment of intestinal obstruction due to small bowel hematoma is surgical resection although a less invasive approach of image guided drainage of mural hematoma of the intestine has been reported with successful initial outcome but with no long term follow up [6]. Simple evacuation of the hematoma without resection has been performed and was reported as adequate in most instances [7,8]. The disadvantage of such a procedure is the development of residual hematoma which might need another surgical

Fig. 1. Bruises in upper abdomen at site of trauma.

Fig. 2. (A&B) CT showing the jejunal haematoma.
intervention. However, when the viability of the bowel is questionable, or there is a large hematoma, resection or additional bypass procedures may be indicated.

Trails of conservative management for traumatic jejunal injury have been reported in the literature with good outcome. In his article Abbas et al. reported the successful nonoperative management of several cases of nontraumatic small bowel hematoma [9]. Conservative management may be justifiable in case where the intestinal obstruction is incomplete and when the patient clinically stable, but if the hematoma is large and causing complete intestinal obstruction as was the case in our patient, it is unlikely to resolve without surgery.

4. Conclusion

Intramural jejunal hematoma after blunt abdominal trauma is seen predominately in pediatric age group and can present as intestinal obstruction. It should be suspected when a child presents with intestinal obstruction and a concurrent history of blunt abdominal trauma. The mainstay of treatment is surgical intervention. Because of the rarity of this disease, the role of conservative therapy is undefined.

Conflicts of interest

No conflicts of interest.

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Consent

Written informed consent was obtained for publication of this case report and accompanying images.

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Author contribution

Dr Noura Al-Zarouni → Writing.
Dr.Labib Al-Ozaibi → Study design.
Dr.Ali Khammas → Data analysis and interpretation.
Dr.Nusaiba Al-Suwaidi → Data collection.
Dr.Alya Al-Mazroui → Critical revision.
Dr.Faisal Al-Badri → Revision and final approval.

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