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Original Research Article

Abdominal Injuries in the Child at the Hospital Fousseyni Daou de Kayes

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Abstract: ***Introduction:*** Abdominal trauma is a shock of any kind exerted on the abdomen. It is quite frequent in childhood and is of type: abdominal bruises, and abdominal wounds. This study aimed to assess the epidemio-clinical and evolutionary aspects of abdominal trauma in childhood. ***Materials and Methods:*** The results, from a retrospective study covering children aged 0 to 15 years, treated in the Pediatric Surgery Service of Fousseyni Daou Hospital in Kayes from January 2021 to December 2023 for abdominal trauma. ***Results:*** Over a period of 2 years we collected 20, 16 boys and 4 girls cases, being a hospitalization frequency of 5.71%. The age bracket of 11 to 15 years was majority being 60% with a male predominance of 80%. Pupils were the majority with 60%. The predominant functional sign was abdominal pain in 100% of cases and one case of terminal hematuria, associated with a minimal pelvic fracture secondary to a seizure. Ultrasound imaging was performed in 80% of our patients. A laparotomy was performed in 35% (7). In our operated patients we recorded 1 case of parietal suppuration. Evolution was favorable in all our patients and one was reoperated for occlusion on flange. After a median retraction of 6 months, the mortality rate was 0%.

Keywords: Traumatic abdominal trauma, child, Fousseyni Daou Hospital.

INTRODUCTION

Abdominal trauma is defined as a shock of any kind exerted on the abdomen [1]. Traumatic abdominal injuries are extremely common and highly variable.

Abdominal trauma falls into two categories:

- The abdominal bruises (without rupture of the parietal continuity).
- And abdominal wounds (with breakdown of parietal continuity).

Abdominal injuries are essentially responsible for road traffic accidents in 80% of cases, including occupational, domestic and sports accidents [2].

Abdominal trauma constitutes an ongoing concern for the surgeon as he or she must be aware of:

In the case of abdominal bruising, the problem is to determine whether it is a purely parietal bruise or whether there are visceral injuries requiring an appropriate therapeutic approach.

In case of penetrating abdominal wound if the wound is painful (requiring emergency surgery) [3].

Abdominal injuries are caused by a direct, or indirect, impact.

A visceral injury is found in 10 to 30% of abdominal trauma cases [4].

Abdominal trauma can be associated with poly trauma with often an engaged vital prognosis therefore making a surgical action decision difficult [5].

This study aimed to assess the epidemio-clinical and evolutionary aspects of abdominal trauma in the child at Fousseyni Daou Hospital de Kayes

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MATERIALS AND METHODS

We conducted a two-year retrospective study from January 2021 to December 2023. For this purpose, we exploited the medical records of children admitted to the pediatric surgical service at Fousseyni Daou Hospital of 350 in number.

RESULT

Among the 20 recorded cases, 14 were boys (80%) and 6 were girls (30%) i.e. a sex-ratio of 2.33. The mean age was10, 05 ± 3.8 years with extremes of 1 and 15 years. Public road accidents accounted for 45% of the cases. The majority of patients were admitted after a delay of 12 hours. All our patients presented with abdominal pain in either 100% of the cases. Six of our patients benefited from an abdominal ultrasound either at a rate of 80%.

The age tranche between 11-15 years was majority with 60%. In our series 80% of our patients resided in Kayes. Abdominal pain was present in 100% of our patients. Hemodynamic instability was present in 45% of our patients. We found a matteness in 75% of cases. In our series 50% of patients had a hemoglobin level above 11g/dl. Our patients presented with hemoperitoneum in 35% of cases. Nonoperative management was the most commonly observed therapeutic modality with a rate of 65%. A laparotomy was performed in 7 of our patients. We encountered a case of rat spleen that underwent splenectomy, bladder tear followed by vomiting, 2 mesenteric lesions and 3perforations of the small intestine. The surgical sequelae were simple except for one case of parietal suppuration observed.

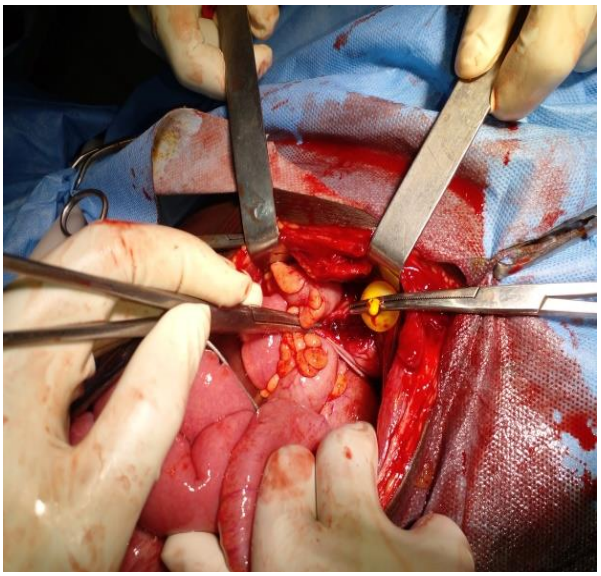

Fig. 1: Bladder perforation

Fig. 2: Mesenteric lesion

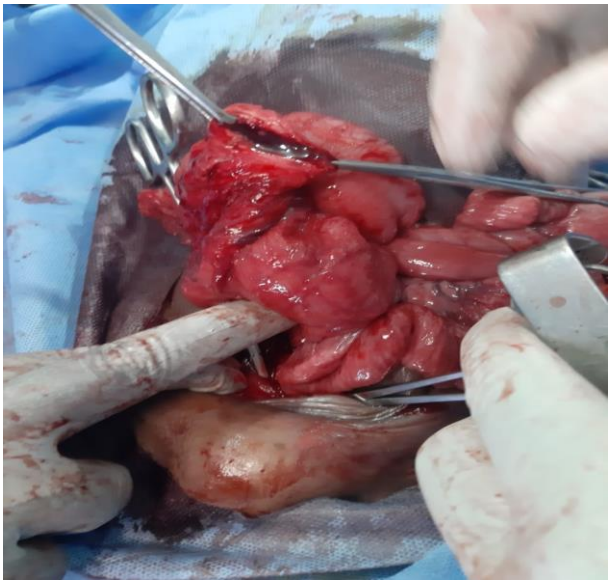

Fig. 3: Bowel perforation

Fig. 4: Contusion of the spleen

DISCUSSION

During the two-year period, 350 patients were hospitalized, of which 20 children presented with abdominal trauma either 5.71%. This rate is comparable to that of Koné [9] in Mali and lower than that of some authors [6-7] with respective rates of 8.88% and 8.40%. It is higher than that of Camara [8] by 2.4%. This difference could be partly due to the different duration of education in different jobs and partly due to several factors notably (the population, education level, education non-compliance with the traffic code and increase in public road accidents).

In our series, the mean age was 10.05 years ± 3.8 with extremes of 1 to 15 years which is similar to those found by Laamrani [10] in Morocco (10.5 years) and Camara [8] in 2014 (39.8 years) in Mali.

Our study had a male predominance or a sex-ratio of 2.33, similar to other American and Moroccan series. The turbulence, the great liveliness of the boys might be the cause.

Nine of our patients either 45% consulted after 12 hours of trauma, comparable to that of Camara [8], 44% in Mali but 56.2% of patients had consulted within 6 hours of trauma.

In our series, AVP accidents from the public road) accounted for 45% of the cases. Our results are consistent with literature data [11–12]. The AVPs dominate the cases regarding trauma. Other etiologies include domestic and sports accidents.

Abdominal pain is generally the first sign after an abdominal injury. It was the most consistent sign in our series either 100% as opposed to Ozturk [13] who found it only in 32%. Other signs were vomiting, headache, fatigue and hematuria.

Abdominal trauma most commonly results in a hemoperitoneum that may be responsible for a state of shock revealed by hypotension, tachycardia, and conjunctival pallor. These signs have been reported by malignant [8–14], Swiss [7] and American [15] studies.

Hyperthermia is generally absent in closed abdominal trauma except for an infectious complication. We have noted this in 30% of our patients.

In our series 54% of our patients had abdominal defense. This rate is statistically higher than that of Togola [14] (13.0%) and Camara [8] (26.7%). Abdominal ultrasound was performed in 80% of our patients and allowed us to target cases of hemoperitoneum. It is a sensitive and performing test for the diagnosis of any intra-abdominal spread. Previously, X-ray of the abdomen without preparation (ASP) has targeted cases of intestinal perforations We found that in all studies operative management is not more systematic in cases of closed abdominal trauma. Our rate is 65 %. Laparotomy was performed in 35 % of our patients. Our rate of laparotomy is close to those reported in the literature [17,18] with respective rates, 44.7% and 42.1%. What is evident is that there is a higher absorptive capacity of antherocytes in children on the one hand and on the other hand, the study population (children only).

In our series, the operative outcomes were favorable in all our patients. We recorded no in per operative and post operative deaths except one case of parietal suppuration was observed.

CONCLUSION

Abdominal injuries to the child are more common and are particularly due to road traffic accidents. The lesions in decubitus are very diverse. Conservative management allows for a high rate of satisfactory results. Surgical management intervenes in specific situations or we find lesions engaging the vital prognosis.

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