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Case Report

MESENTERIC THROMBOSIS IN PATIENT VICTIM OF BLUNT ABDOMINAL TRAUMA

Trombose mesentérica em vítima de trauma abdominal fechado

Iwan Augusto **COLLAÇO**, Allan Cezar **DIORIO**, Adonis **NASR**, Fernanda Cristina da **SILVA**, William Augusto Casteleins **CECÍLIO**, Rodolfo Cardoso de **TOLEDO-FILHO**

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ABSTRACT – ***Introduction*** - Mesenteric thrombosis related to trauma is an uncommon entity and has poor prognosis when associated to low perfusion and hemorrhagic shock. Usually presents a challenging diagnosis and high mortality rates, despite appropriate treatment. ***Objective*** - To relate a case of a car accident and blunt abdominal trauma with terminal ileum and right colon necrosis. ***Case report*** - After initial procedures, complementary exams showed ribs and humerus fractures. Computerized tomography evidenced aerial distension in small bowel, gastric stasis and hidro-pneumothorax. Hypotension was observed during clinical observation followed by cardiopulmonary arrest, responding to reanimation. At surgery, it was found extensive necrosis of right colon and terminal ileum, and an ileum-transversostomy was performed with primary anastomosis. During the staying in intensive care unit, oliguria, miosis, convulsion and pulseless electric activity happened with death in three days after hospital admission. ***Conclusion*** - Although uncommon, mesenteric ischemia with venous thrombosis might be secondary to blunt abdominal trauma and must be considered in a bad abdominal evolution.

HEADINGS - Abdominal trauma. Blunt trauma. Mesenteric thrombosis.

INTRODUCTION

Mesenteric thrombosis is an uncommon entity, with pain as a hallmark symptom. The main etiological causes are intrinsic anticoagulant deficiencies, infection and trauma[2]. In case of trauma, the resulting ischemic complications are associated with hemorrhagic shock, leading to acute renal, pulmonary and hepatic failure and ending with patient´s death[4].

CASE REPORT

A 45 years-old male was admitted in Advanced Trauma Life Support Unit in the Emergency Service of the Hospital do Trabalhador, Curitiba, PR, Brasil victim of motorcycle accident. In the initial exam, he presented chest contusion associated with reduction in breath sounds in the base of the right lung, besides alcoholic breath. Vital signals were normal, with a RTS (Revised Trauma Score) of 7,84 points and 14 in the Glasgow Coma Scale.

In routine radiological exams, multiple right rib fractures and a closed fracture of the humerus were found. After analgesia and intravenous saline hydration, he kept on referring diffuse abdominal pain. Computerized tomography was performed and gas inside portal vessels, intramural air in distal small bowel (suggesting the occurrence of severe ischemic process) and a thin layer of perihepatic liquid (Figures 1 and 2) were found. The patient was maintained in clinical observation during the night, with vomiting and transitory blood pressure drop, culminating with cardio-respiratory arrest after two hours from initial treatment. Resuscitation was promptly done in the usual manner with additional tracheal intubation and mechanic ventilation.

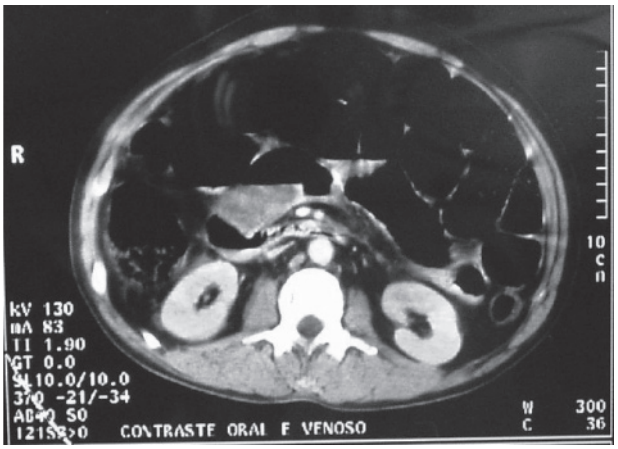

FIGURE 1 - Abdominal tomography with oral and venous contrast shows aerial distention in small bowel loops, along with intramural air and gaseous embolism of portal vein

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Endereço para correspondência:Adonis Nasr, e-mail: adonis@bighost.com.br

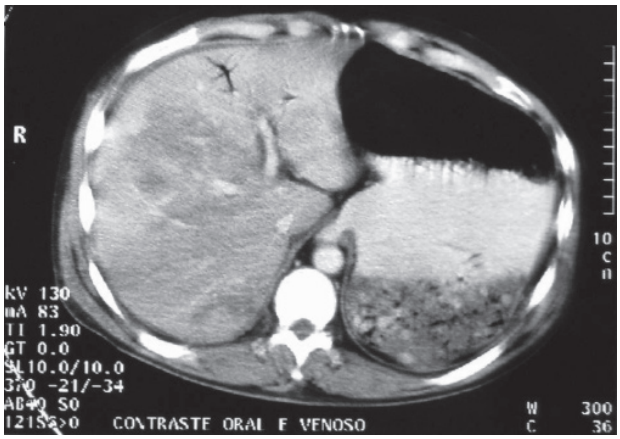

FIGURA 2 - Abdominal tomography with free liquid in the cavity and a thin layer of perihepatic liquid.

Next day morning, diagnostic peritoneal lavage was performed, resulting in a dark blood-like fluid indicating exploratory laparotomy. A rapid preoperative anesthetic evaluation classified the patient as ASA III (American Society of Anesthesiologist classification). Blood gasometry collect at that moment was compatible with mixed acidosis (pH=6,924).

Surgical exploration revealed the presence of 300 mL of free liquid in the abdominal cavity, and extensive necrosis of approximately 90 cm of intestinal loops, interesting terminal ileum and ascending colon. Right hemicolectomy with ileum-transverse anastomosis was performed. It was also found laceration of the inferior pole of spleen, and a small bleeding from portal vein, immediately sutured. The abdominal cavity was covered with a Bogota bag for temporary closure, leaving five bandages inside the abdomen for hemostasis. During surgery, three units of erythrocytes concentrate and three units of fresh frozen plasma were infused. In the afternoon, the patient was admitted in the intensive care unit, remaining hemodynamically unstable.

During the next two days, invasive mechanic ventilation was sustained, along with the prescription of catecholamines, transfusion of six extra units of erythrocytes and 10 units of platelets. Oliguria, miosis, convulsion, pulseless electric activity and other two cardio-respiratory arrests were present in this period of time. He died on the third day, before a new laparotomy could be done for damage control.

DISCUSSION

The occurrence of shock-associated right colon necrosis, presented in this case, is rarely reported in literature. In three similar cases, all patients suffered a period of hypotension after injury[4]. Diagnosis and operation took place within two days of initial trauma, resulting in right colectomy and primary anastomosis without complication. In all cases, pathologic examination showed ischemic necrosis, but no evidence of vascular thrombosis or embolic occlusion of the mesenteric vessels. The etiology of this type of ischemic colitis is not clear, but seems to represent a form of non-occlusive mesenteric ischemia.

Another paper, covering eight years observation, identified 13 cases treated for superior mesenteric vascular injury secondary to blunt abdominal trauma[1]. Six patients had profound shock, two with cardiopulmonary arrest. Mortality rate was 57%, primarily due to massive acute hemorrhage.

Contrast-enhanced tomography is considered the choice exam for acute mesenteric vein occlusion in non-traumatic situations[3]. Emergency ones, on the other hand, must have suspicious diagnosis based on clinical observation after in-hospital admission.

CONCLUSION

Although uncommon, mesenteric ischemia with venous thrombosis might be secondary to blunt abdominal trauma and must be considered in a bad abdominal evolution.

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RESUMO – ***Introdução*** - Trombose mesentérica, relacionada à trauma é entidade incomum com pobre prognóstico quando seguida de estados de baixo fluxo e choque hipovolêmico. Geralmente se apresenta com quadro de difícil diagnóstico, mortalidade elevada a despeito de tratamento adequado. ***Objetivo*** - Apresentar um caso de vítima de atropelamento que evoluiu com necrose de cólon direito e íleo terminal. ***Relato do caso*** - Após admissão hospitalar e atendimento inicial, os exames complementares mostraram fratura de costela e úmero. Tomografia computadorizada evidenciou distensão aérea em intestino delgado associada à estase gástrica e hidropneumotórax. O paciente evoluiu com hipotensão durante o período de observação clínica, com parada cardiorespiratória, respondendo à reanimação. Levado para procedimento cirúrgico, encontrou-se extensa necrose de cólon ascendente e parte terminal do íleo. Realizou-se hemicolectomia direita com ileotransversostomia. Em cuidados de UTI, evoluiu com oliguria, miose, convulsão e atividade elétrica sem pulso, falecendo três dias após. ***Conclusão*** - Embora incomum, isquemia mesentérica com trombose venosa pode ser secundária a trauma abdominal fechado.

DESCRITORES - Trauma abdominal. Trauma contuso. Trombose mesentérica.

REFERENCES

1. Courcy PA, Brotman S, Oster-Granite ML, Soderstrom CA, Siegel JH, Cowley RA. Superior mesenteric artery and vein injuries from blunt abdominal trauma. J Trauma 1984;24(9):843-5.
2. Geyer DE, Krenning LE. Mesenteric venous thrombosis: a case report. J Fam Pract 1993;36(4):454-6.
3. Haage P, Krings T, Schmitz-Rode T. Nontraumatic vascular emergencies: imaging and intervention in acute venous occlusion. Eur Radio. 2002;12(11):2627-43.
4. Ludwig KA, Quebbeman EJ, Bergstein JM, Wallace JR, Wittmann DH, Aprahamian C. Shock-associated right colon ischemia and necrosis. J Trauma 1995;39(6):1171-4

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