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Psychological barriers in long term non-operative treatment of retroperitoneal hematoma

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Presentation

The retroperitoneal hematoma can have, mainly, a traumatic etiology - blunt abdominal trauma (falls from height, road accidents, aggression of any kind, etc.), or open (incised wounds, puncture, penetration or gunshot wounds). Ruptured arterial aneurysms can cause hemorrhage in the retroperitoneal space. There is also spontaneous retroperitoneal trauma in patients with chronic treatment with anticoagulant or antiaggregant drugs (1). Hemorrhage in the retroperitoneal space can be iatrogenic, after surgical, open or laparoscopic, interventions (2, 3). A particular type of retroperitoneal hematoma is the psoas muscle hematoma in patients with chronic oral anticoagulant treatment (Acenocumarol, Warfarin).

The management of the retroperitoneal hematoma, whatever the cause may be, is, for most of the time, difficult. In case of traumatic etiology, the retroperitoneal hematoma is not the only lesion, being frequently associated with severe hollow or parenchymal organs injury or vascular lesions, which highlights the importance of a complete and precise clinical inventory of the lesions.

The decision between an aggressive, surgical or interventional attitude and a conservative one, with monitoring, is often taken under pressure. Especially difficult are the cases in which the imaging results of the lesions is uncertain, when the patient presents hemodynamic instability, when other lesions can not be excluded, or when the parietal peritoneum is ruptured and the retroperitoneal hematoma gets into the peritoneal cavity, the patient presenting haemoperitoneum. For most of the time, these cases have indication for exploratory laparotomy, for a diagnostic, not therapeutic, goal.

The retroperitoneum contains viscera and vascular structures, parts of the gastrointestinal, genitourinary, neural, musculoskeletal and vascular systems. Injury of these structures can cause hemorrhage at this level, with the development of the retroperitoneal hematoma. The mortality rate for the traumatic retroperitoneal hematoma is between 18 and 60% (4).

Early diagnosis and prompt treatment are essential in reducing mortality. According to the classification of Selivanov, retroperitoneal hematomas are divided into three areas: centro - medial (zone I), lateral (Zone II) and pelvic (zone III) (5).

The clinical diagnosis is difficult, signs and symptoms being nonspecific: abdominal pain, back pain or localized in the iliac fossa, neuropathic pain, abdominal wall bruising localized periumbilical or on the abdominal flanks, etc. Thus, ultrasound and, especially, computer tomography plays an essential role in diagnosis (6). Unlike CT, ultrasound can not specify the extension of the hematoma and can not exactly appreciate any associated visceral lesions, especially of hollow viscera. For this reason, all patients who are hemodynamically stable, with suspected diagnosis of retroperitoneal hematoma, have indication for computed tomography. The accuracy of the result depends on the resolution and the experience of the radiologist. For hemodynamically unstable patients, exploratory laparotomy is indicated .

There are two types of therapeutical management for the patients with retroperitoneal hematoma: surgical and conservative management (7). Once the visceral lesions are confirmed, the exploratory

laparotomy is indicated, with no delay. The source of hemorrhage and the clinical evolution depend upon the etiology of the hematoma. In cases of penetrating trauma (open wounds), most of the retroperitoneal hematomas are associated with lesions of the abdominal viscera, making the exploratory laparotomy a vital step in the algorithm of the management. In concussions (blunt trauma), the decision between conservatory treatment and exploratory laparotomy is made taking into account the clinical status of the patient.

The retroperitoneal hematomas have different clinical expressions caused by different areas of occurrence. The most common retroperitoneal hematoma in our clinic are the ones localized in the pelvic area (zone III) , associated with pelvic fractures. In most case , an adequate volume rebalancing associated with fracture stabilization can control the hemorrhage.

For the unstable patients, angiographic embolization, internal iliac ligation or packing may be required. In most cases, the conservative management of the pelvic hematoma is needed. Moreover, a tempestuous intervention of exploration and evacuation of these hematomas may result in uncontrollable bleeding and even death. In cases of rectal, bladder or other organs injury, surgery is indicated for a proper management of these lesions.

Zone I hematomas (centro-media) can occur in duodenal, pancreatic or great vessels injuries. Great vessels lesions, when do not cause hypovolemic shock with rapid death, can lead to an extended hematoma, with signs and symptoms determined by its rapid growth. High level of amylase in blood and urine, peripancreatic or periduodenal effusions and the presence of the pneumoperitoneum can lead to the diagnosis of pancreatic or duodenal lesions, frequently requiring laparotomy (8).

Centro-median hematomas in stable patients, without the signs or symptoms mentioned above, can be treated in a conservative way, with close monitoring of the patients.

If necessary or in case of signs certifying lesions with indication for surgery, the intervention is programmed for a later time. Sometimes the hematoma itself can lead to hemostasis, through direct

compression on the injured vessels. Therefore, very often, aggressive attitude in these cases, with hematoma evacuation, may have severe consequences, causing bleeding that can not be easily managed. The surgeon should resist, in these selected cases, the "temptation " of an unnecessary laparotomy.

Type II hematomas (lateral) can be the consequence of renal or colonic injuries, and can be perirenal, retrocolonic or lateroabdominal hematomas. When the colonic lesions are diagnosed, the surgical intervention is indicated. The septic colonic content, in the absence of the abolition of the continuity solution, will soon determine a severe retroperitoneal cellulitis, hiperseptic, quickly leading to septic shock and death of the patient.

Sometimes, even though there is only a supposition of a large intestine lesion, an exploratory laparotomy is preferable instead of neglecting different colonic injuries, especially in the case of a secondary retroperitoneal colonic segment, through Toldt I and II coalescence fascia, where the lesions can remain clinically silent, with no signs of periotneal irritation.

In perirenal retroperitoneal hematomas, the conservative management is recommended. For most of the cases the evolution is favorable, with the resorbtion of the hematoma and spontaneous resolution of the minor renal lesions (of low grade). Important renal lesions, with injury of the excretory system and urine evacuation in the adjacent spaces, as well as an expansive and pulsating hematoma, are indications for surgical intervention.

In the situation of choosing the conservative treatment of the retroperitoneal hematoma, regardless the cause, the patient will be intesively monitored, volemicly rebalanced and imagistically investigated, as often as is considered necessary. When a new lesion is diagnosed the surgical intervention must be proceeded, anytime during the evolution of the patient.

The spontaneous resorbtion of the blood accumulation takes a prolonged period of time, thus the monitoring interval is performed for a long time, implying important costs, but, on the other hand,

avoiding intempestive surgical intervention, which can be proved to be useless or, in some cases, even dangerous.

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