In our patient, none of the symptoms or test findings guided the diagnosis toward chyloperitoneum, but rather toward chronic abdominal pain and the progressive development of an internal hernia due to weight loss as the first etiological cause, which is why exploratory laparoscopy was indicated.[8] The extrinsic compression of the lymphatic vessels of the mesentery explained the appearance of chyloperitoneum.

For the treatment of chyloperitoneum, its cause should be considered, although it is usually based on parenteral nutrition associated with somatostatin or octreotide, diets low in fat with medium-chain triglycerides, since these go directly to the blood circulation without passing through the lymph.[9] Surgery is not the initial therapeutic option.

When treating patients with previous laparoscopic gastric bypass who present abdominal pain, Petersen hernia should always be included in the differential diagnosis, even when radiology tests are negative. Closure of the orifices with potential for herniation during the bariatric procedure may reduce the incidence of this complication.[10] The laparoscopic approach in cases of hernia is recommended, whenever feasible.

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Embolization of Femoral Pseudoaneurysm Secondary to Contusion by Bull Horn☆

Embolización de seudoaneurisma femoral secundario a contusión por asta de toro

Patients injured during bullfighting can be considered polytrauma cases, as they present special characteristics related to the unique nature of the traumatic agent: the bull. Vascular trauma and hemorrhage are important components of the

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medical treatment of trauma patients in general and bull-related trauma patients in particular.[1] Although not always well known, vascular radiology plays an important role in the diagnostic and therapeutic management of polytrauma patients, where bleeding control is a priority. Once the diagnosis of vascular injury and its location have been established, the interventional radiologist has tools for endovascular hemorrhage control.[2] The first endovascular method to control hemorrhage was described in 1972. Since then, new techniques have been developed, and the technology has become increasingly accessible. Currently, endovascular treatment is considered a primary indication in many vascular trauma injuries.[3] The availability of a vascular radiology team that is capable of reacting quickly make it possible to successfully incorporate endovascular hemorrhage management in trauma care protocols, and especially in those for bull-related trauma.

We present the case of a patient who, after a contusion received while bullfighting, presented a hematoma with pressure in the right lower limb due to a femoral pseudoaneurysm.

During a bullfight, a 22-year-old male bullfighter received a contusion (*varetazo*) by the right horn on the inner side of the right thigh. During examination in the infirmary at the bullring, the patient was stable, with a contusion on the inner side of the right thigh and a large hematoma under pressure, but no cutaneous wound. Good mobility of the right leg was observed; inguinal, popliteal and tibial pulses were preserved. The patient was brought to the hospital, where Doppler ultrasound revealed a large hematoma in the inner region of the right thigh and ruptured muscle fibers. The common and superficial femoral vein and artery were permeable and displaced upwards by the hematoma. In the lower portion of the hematoma, a long-neck pseudoaneurysm (1.5 cm) of the superficial femoral artery was observed. Arteriogram/arteriography detected 2 points of bleeding. The most proximal depended on the first branch of the deep femoral artery and manifested as a small pseudoaneurysm. The most distal point of bleeding depended directly on the superficial femoral artery, creating a double pseudoaneurysm and arteriovenous fistula (which implied early filling of the femoral vein) (Fig. 1A). Coil embolization was carried out of the first branch of the deep femoral artery and a 5-cm coated endograft was placed in the injured segment of the superficial femoral artery (Fig. 1B). After radiological treatment, the patient reported a significant improvement in pain and reduced tension in the lower right limb. The patient's progress was favorable, and he resumed his professional activities 2 months later. Two months after the injury, follow-up studies were normal.

Doppler ultrasonography and multi-slice CT scans are 2 diagnostic tests that have proven useful in the management of patients with trauma hemorrhage. Its early use is decisive, so quick and easy access from the emergency room is vital. These scans will often show a hematoma and frequently the pseudoaneurysm or contrast extravasation that identifies the point of bleeding. The location of the hemorrhage is necessary for the endovascular treatment to be quick and effective, since it allows the interventional radiologist to go directly to the bleeding site and prepare in advance the most appropriate embolization material. Angiography will confirm

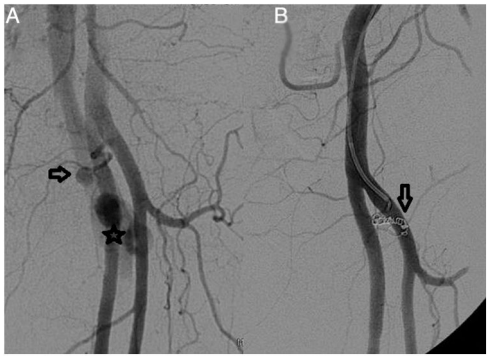

Figure 1 – (A) Arteriography showing 2 bleeding points. The most proximal depends on the first branch of the deep femoral artery and manifests as a small pseudoaneurysm (arrow). The more distal bleeding point depends directly on the superficial femoral artery and manifests as a double pseudoaneurysm (star) and arteriovenous fistula. (B) Arteriography after endovascular treatment. The first branch of the deep femoral artery has been embolized with embolization coils (arrow), and a coated stent measuring 5 cm in length has been placed in the injured segment of the superficial femoral artery. (The stent is not visible in the image. Instead, the direct effect of its placement is observed, which is the cessation of the bleeding seen in image A.)

the bleeding point and accurately determine the bleeding vessel. This allows for embolization, when appropriate, and provides valuable information to the surgeon before surgery, when necessary. On ultrasound, CT scan or angiography, contrast extravasation is a direct sign of bleeding; indirect signs are pseudoaneurysm and arteriovenous fistula, as observed in our patient.[4] Remember that ultrasound is not always specific, as it can be artifacted by the hematoma and it is very examiner-dependent, in which case a complementary CT scan should be used. If it is diagnostic, as in our case, it is not necessary to perform the CT scan.

There are 3 fundamental endovascular methods to control bleeding from any source: temporary balloon occlusion, embolization and stents. Placement of a balloon proximal to the point of hemorrhage, occluding the injured vessel, is a rapid measure to control bleeding prior to surgical repair. Embolization and stent placement are techniques that aim to definitively resolve bleeding, which they did in our patient.[1]

Embolization involves obstructing the bleeding vessel by releasing an occluder inside it. To be effective in areas with rich collateral vascularization, such as the superficial femoral artery, it is necessary to embolize the vessel both proximal and distal to the leak. Micro-catheters and micro-guides now provide superselective endovascular access to practically any point of the vascular tree. Remember that embolization should be as selective as possible to avoid unwanted ischemia in another areas. When embolization is effective and does not cause secondary ischemic lesions that require intervention, surgery can be avoided.[5] If there are other injuries requiring surgical treatment, this will be done in better hemodynamic conditions after hemorrhage control.

Coated stents or stent grafts are metal mesh tubes covered in a biocompatible material that, when collapsed and placed in a suitable carrier, can be taken endovascularly to the injured vessel and released in the appropriate location. Once in place and covering the leak, the stent is able to control bleeding and restore or preserve the affected vessel, as observed in our case. A drawback to these stents is that they require periodic permeability monitoring in the medium and long term. However, in these highly vascularized areas with important collateral circulation, the implantation of intravascular ''foreign'' material does not present significant problems once the acute bleeding problem has been resolved, as any possible thrombosis is supplanted without problems by the collateral circulation. It must be remembered that, in most cases, the vessel is ligated when the bleeding point is located.

If the vascular trauma is caused by direct penetration of a bull horn, the use of this technique may be limited by significant wound contamination, as it is inadvisable to insert a foreign body under septic conditions.[6] Furthermore, open lesions require surgery in most cases.

Finally, we must remember that surgery in these patients is not simple. Frequently, the presence of the hematoma, infiltration of blood throughout the entire muscle plane and associated edema greatly complicate the location of the bleeding vessel. These procedures usually require exposing large areas to locate the bleed, which is not exempt from associated surgical morbidity.

In conclusion, we can say that endovascular therapy is useful in contusions caused by bull horns with vascular involvement.

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Differential Diagnosis of a Hepatic Mass by ^{99m}Tc-labelled Red Cells and Octreotide Scintigraphy☆

Diagnóstico diferencial de masa hepática mediante gammagrafía con hematíes marcados y octreótido

The widespread use of diagnostic imaging techniques has led to an increase in the identification of hepatic masses, making it necessary to differentiate between malignant and benign masses. For this purpose, the technique of choice continues to

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