In the last years, new literature has become available, and robotic pancreatic surgery had a significant expansion. Recently, the internationally validated European guidelines on minimally Invasive Pancreatic Surgery proclaimed that the learning curves for robotic distal pancreatectomy are slightly shorter compared with a laparoscopic approach. Apart from, minimum center volumes and indications for minimally invasive surgery were the most debated topics.[4]

Again, we would like to thank you for your suggestions.

REFERENCES

1. Xu SB, Jia CK, Wang JR, et al. Do patients benefit more from robot assisted approach than conventional laparoscopic distal pancreatectomy? A meta-analysis of perioperative and economic outcomes. J Formos Med Assoc. 2019;118:268–78. http://dx.doi.org/10.1016/j.jfma.2018.05.003.
2. Beane JD, Henry AP, Scott CD, et al. Assessing the impact of conversion on outcomes of minimally invasive distal pancreatectomy and pancreatoduodenectomy. HPB. 2018;20(4):356–63. http://dx.doi.org/10.1016/j.hpb.2017.10.007.
3. Müller PC, Kuemmerli C, Cizmic A, et al. Learning curves in open, laparoscopic, and robotic pancreatic surgery: a systematic review and proposal of a standardization. Ann Surg. 2022;3(1):e111. http://dx.doi.org/10.1097/AS9.0000000000000111.
4. Abu Hilal M, van Ramshorst T, Boggi U, et al. The brescia internationally validated European guidelines on minimally invasive pancreatic surgery (EGUMIPS). Ann Surg. 2024;279(1):45–57. http://dx.doi.org/10.1097/SLA.0000000000006006.

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Comment on "Sheathed goring: An unusual bull-horn injury"

Comentario a "Cornada envainada: una lesión por asta de toro infrecuente"

Dear Editor,

We have reviewed with great interest the manuscript recently published in the journal, *Cirugía Española*, by Benítez Riesco et al.[1] We would like to congratulate the authors on their work and their contribution to the visibility of a rare but sometimes devastating injury in terms of morbidity and mortality.[2]

Sheathed goring, also known as "goring of the healthy" or "internal goring", is defined as a subtype of penetrating bull-horn trauma, where, despite the skin remaining intact, there is injury to the deeper structures and tissues, which may be associated with eventrations or vascular and visceral injuries of greater severity. In reality, it is a contained evisceration. This peculiarity of bull-horn trauma is due to the characteristics of the kinematics of the bull's charge and the high elastic capacity of human skin, maintaining its integrity uninterrupted (this can sometimes be associated with slight superficial alterations: ecchymosis or haematomas).[3,4]

Few authors in the literature describe this type of trauma, and almost all are descriptions of isolated clinical cases.[2,4–7] At the Surgery Dept. of the Hospital General Universitario in Castellón, we published our experience after undertaking the largest review of bull-horn trauma injuries recorded to date.[8]

In our series of 572 patients, we report an incidence of sheathed goring of less than 1% (0.7%). The 4 affected patients (male, with a mean age of 35 years) had sustained blunt bull-horn trauma at abdominal level with complete skin integrity. All were seen in the emergency department as polytrauma patients, and after primary ATLS (Advanced Trauma Life Support) assessment, a computerised axial tomography (CAT) scan was run and emergency surgery undertaken. In 75% of patients, associated visceral injuries (renal, intestinal and mesenteric injury) were observed. After specific surgical treatment for each type of lesion, primary repair of the abdominal wall was performed, in half of the cases with the placement of a prosthetic mesh, with no differences being observed between the two in terms of subsequent recurrence or infections (0% in both techniques). The mean hospital stay was 8 days, no patient stayed in the intensive care unit, and the mortality rate was zero.

Thus, although bull-horn injuries are frequent in our environment, the incidence of sheathed goring is extremely low. However, it is important to be aware of and suspect this type of injury in the event of blunt abdominal trauma; to run a systematic primary assessment and an exhaustive physical examination, along with a radiological study (whenever the patient's stability allows), preferably a CT scan, to diagnose these cases and rule out associated intra-abdominal injuries. Surgical treatment should be urgent and the repair of the abdominal wall will be determined by the size of the defect, tissue characteristics, haemodynamic stability and level of contamination.

REFERENCES

1. Riesco AB, Moreno MDCF, Alfosea CG, Rodrigo DC. Cornada envainada: una lesión por asta de toro infrecuente. Cir Esp. 2024. http://dx.doi.org/10.1016/j.cireng.2023.10.011.
2. Salvoch JJ, Erce R, Otero A. Ahora lo sabemos, era una«cornada envainada». Cir Esp. 2002;71:51–3.
3. Val-Carreres MP. Las heridas por asta de toro en el contexto de la cirugía general. Tesis doctoral, vol. 1. 2007. Zaragoza.
4. Martínez-Ramos D, Villegas-Cánovas C, Rivadulla-Serrano I, Salvador- Sanchís JL. Cornada envainada. Una lesión poco evidente pero devastadora. Emerge. 2007;19347e349.
5. Zumárraga-Navas P, Sellés-Dechent R, Pardo-Correcher JM, AsencioArana D, Ruiz del Castillo J. Herida por asta de toro: cornada envainada. Cir Esp. 1999;65:447–8.
6. Sellés-Dechent R. Herida por asta de toro: cornada envainada. Cirugía Española. 2002;7253e54.
7. Pérez Santiago L, Martí Cuñat E, Vargas Durand A, Ledezma Peredo NV, Calvete Chorner J, Ortega Serrano J. Hernia traumática de pared abdominal por asta de toro, cornada envainada. Rev Hispanoam Hernia. 2020;8:141–3.
8. Martínez Hernández A, Martínez Ramos D, García Moreno MV, Abdlekader Mohamed N, López Loscos E, Aliaga Hilario E, et al. Bull horn injuries. A 40-year retrospective study with 572 patients. Am J Surg. 2021;222:446–52. http://dx.doi.org/10.1016/j.amjsurg.2020.11.031. Epub 2020 Nov 18. PMID: 33234235.

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