Repair of 3 ventral hernias in a post-renal transplant patient. A case report

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Background: An incisional hernia or eventration is the protrusion of peritoneum and/or scar tissue, accompanied or not by abdominal structures through an area or orifice of the abdominal wall weakened by surgery or trauma, different from the natural orifices through which primary ventral hernias emerge. (1)
The frequency of incisional hernia or eventration is 10 to 13% of all laparotomies and 3 to 8% of incisions for laparoscopic ports. It increases to 23 to 40% if there was infection of the surgical wound. They appear in the first 3 years after surgery and 50% do so within the first year after surgery. Its mortality rate has been calculated at 0.24%. (2)
In post-kidney transplant patients who will undergo an elective surgical procedure, it is necessary to take into consideration: renal functional reserve, adequate graft integration, associated comorbidities under control, current medication (especially suppressive and anticoagulant) and general condition of the patient. All of this must be evaluated by a specialist, who will provide surgical risk and pertinent pre, trans and post-surgical indications. (3)(4)

Keywords: Ventral hernias, incisional hernia.

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Methods

To analyze the therapeutic-surgical approach and management of 2 large incisional wounds and 1 small umbilical wound in a post-kidney transplant patient.

Results

This is a 54-year-old male patient with diagnosis of CKD+DM2+HAS + PO Double J Stent Placement in 2018 + PO Right Kidney Transplant 2018 + Peripheral vascular insufficiency + Bilateral Charcot foot with transmetatarsal amputation due to chronic osteomyelitis in March 2019. With the following medication for 24 hrs: Cyclosporine .4ml + Mycophenolate 1gr + Prednisone 5mg + Amlodipine 10mg + Insulin Glargine 40IU + Rapid 10IU in the AM, Midday 14 IU rapid, PM 7 IU rapid.

He comes to the General Surgery consultation for the first time with the reason: Postincisional ventral hernia. He reports that 2 years after the transplant he began with 2 bulges that have grown gradually; Currently with mild-moderate pain after any type of effort, accompanied by episodes of abdominal distension. Abdominal examination shows the presence of protrusion, with Valsava maneuver two ventral hernias become evident, L2W3 and L3W2; umbilical M3W1. Simple, without complications. Slightly painful to palpation, non-reducible, incarcerated. Preoperative assessment and abdominal contrast tomography (CT) are requested; with ASA II

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and specific indications are reported in follow-up; the CT was not dynamic, however the Tanaka index is calculated, averaging the volume of each lateral hernia, which was reported as 18.3%; therefore it is decided to schedule for surgical treatment.

Surgical technique: Abdominal marking is performed, a right paramedian incision of approximately 15 cm is made, the first L2 hernial sac is dissected and reduced, finding a 10x10cm defect. The second L3 hernia sac is dissected, reduced, and a 8x12 cm defect is found. A single space is created at the retromuscular level, connecting both defects, for the placement of a double-layer mesh, covering both defects, and fixed with PDS 1. The defects are not connected anteriorly; the fascia of the first defect is only approximated at the proximal edge and the rest is fixed to the mesh with a continuous suture; the fascia of the second defect is closed transversely. A 2x2xm umbilical defect is identified and closed with continuous tension stitches. Hemostasis is verified, a 19fr Blake drain is placed, and the procedure is closed in layers. The patient's progress is favorable and he is discharged with instructions to go home.

After 14 days, despite the follow-up established by both parties, the patient is readmitted due to an infection of the surgical site, which requires surgical cleaning and antibiotics; removal of the mesh is not necessary.

Discussion

Incisional hernias have been associated with a significant reduction in health-related quality of life through their impact on occupation, activities of daily living, mobility, and psychological well-being. It is a common complication following kidney transplantation, with an incidence ranging from 1.6% to 18%. For non-transplant patients, a recent meta-analysis reports that the use of prophylactic mesh in elective midline laparotomies can reduce the incidence of incisional hernia by up to 85%. (5) Its predisposing factors are age, obesity, alcoholism, smoking, emergency surgeries, foreign body implantation, wound infection, hematoma, technical error, and unsuitable suture material. In addition, medical illnesses such as chronic renal failure, liver insufficiency, and pulmonary diseases are among predisposing factors. (6)

Conclusion

In this case, it is essential to properly protocol the patient to minimize complications, such as surgical site infection, since most transplant patients are immunosuppressed, in addition to the fact that in this case diabetes was added. Regarding the surgical technique, it is suggested not to perform extensive dissections, to communicate defects to create the prosthesis space, to completely close or approximate the edges in the anterior part of the defect, to better locate: underlay and placement of drains. Be very vigilant of immediate and late post-surgical complications.

Conflicts of interests

It is declared that there are no conflicts of interest related to the publication of this work.

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