USE OF 3% SEA SALT CLEANSING SOLUTION IN NEGATIVE PRESSURE WOUND THERAPY WITH INSTILLATION IN A DRIVELINE WITH MULTI-RESISTANT *CANDIDA ALBICANS*

GONÇALVES, VIVIANA[1];RAMOS, PAULO[2]

1. CLINICAL SPECIALIST NURSE PRACTICIONER IN WOUND CARE AND TISSUE VIABILITY; MSN - UNIDADE LOCAL DE SAÚDE SÃO JOÃO, PORTO, PORTUGAL
2. CLINICAL SPECIALIST NURSE PRACTICIONER IN WOUND CARE AND TISSUE VIABILITY; MSN - UNIDADE LOCAL DE SAÚDE PÓVOA DE VARZIM/VILA DO CONDE, PORTO, PORTUGAL

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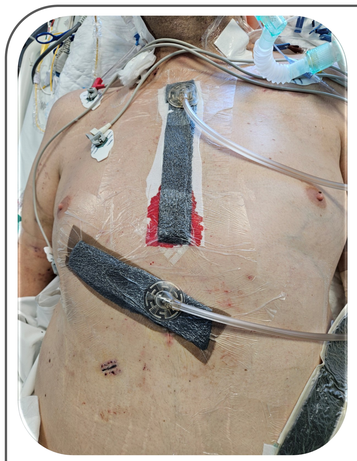
Heart Failure is defined as a syndrome caused by an anomaly in the structure and/or function of the heart, with the greatest impact on global public health, and one of the main causes of morbidity and mortality throughout the world. Although Heart Transplantation is the most recommended treatment, mechanical circulatory assistance devices (right, left or biventricular) have emerged, which respond to the lack of donors, with the most common being the left ventricular assist device - LVAD. The device is controlled by an extracorporeal interface, through a subcutaneous tunneled cable called driveline, which transports energy to the pump, and provides pump information to the system controller. The driveline exit site is percutaneously, in the abdominal wall, posing a greater risk of infection and consequent system failure. When there is an infection of the driveline, it must be cleaned so that bacterial progression does not develop into the implanted device, which if this happens could be a cause of death.



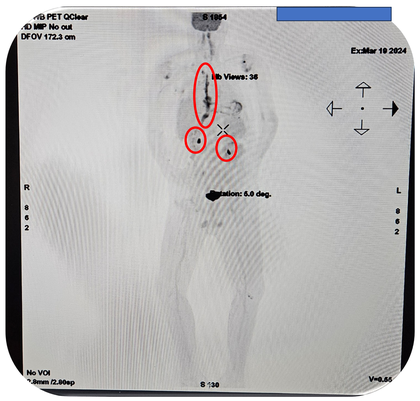
Sternotomy and local drains incisions. After LVAD implantation

Driveline exit site

The presence of multi-resistant microorganisms makes the cleaning process difficult and may put the system's functioning at risk. The use of hyperosmolar solutions is an effective tool in this type of complex wounds.

Case study of sternotomy dehiscence after LVAD implantation with multi-resistant *Candida albicans* infection.

Purulent exudate in abundant quantity, with odor. Positive biopsies for 3 months for *Candida albicans*. With antifungal intravenously for 8 weeks, no positive results. Decided to perform a PET Scan.



Positive in sternum wires and driveline

Clinical decision:

Removal of the sternum wires.

Tissue and skin debridement not feasible.

Application of NPWT-i with hyperosmolar solution with sea salt and sodium hypochlorite.

24 hours

4 days

7 days

10 days

4 negative biopsies

Change to conventional NPWT

14 days

MIcrobiology and mycology with negative results. Analytical parameters unchanged. Good healing progress over 4 weeks.

5 months until closed

The use of hyperosmolar solutions allows a new approach to multi-resistant microorganisms in cleaning complex wounds. In this case, it allowed for secondary intention closure of the sternotomy region and maintenance of the life support device.

References

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