## Surgical Debridement and Advanced Therapies in the Treatment of Wound Dehiscence in Elderly Patients



Anna Flávia Figueiredo Fernandes<sup>2</sup>, Natália Antunes Souza<sup>1</sup>, Walton Tedesco<sup>2</sup>, Paulo Marcel Yoshii<sup>2</sup>, Rogério Aleksander Sakuma<sup>1</sup>, Everton Thiarles dos Santos<sup>1</sup>. <sup>1</sup>Centro Brasileiro de Medicina Hiperbárica e Lesões Complexas – CEBRALE <sup>2</sup>Irmandade Santa Casa de Londrina – ISCAL

**Objective:** To present the clinical evolution of a 78 years old male patient with multiple comorbidities who underwent coronary artery bypass grafting and faced postoperative complications, including surgical wound dehiscence.

**Method/Case report:** Male patient, 78 years old, with diagnoses of severe Coronary Artery Disease (CAD); previous Acute Myocardial Infarction without ST-segment Elevation (NSTEMI); Arterial Hypertension (HTN); Type 2 pre-diabetes and gouty arthritis. Underwent myocardial revascularization surgery (4-bridge CABG) on 08/20/2024. He started follow-up with the dressing committee due to surgical wound dehiscence (WC), with serosanguinous secretion output, diagnosed with sternal osteomyelitis. He opted for surgical debridement of the mediastinal wound on 09/04/2025 and the placement of Negative Pressure Therapy (NPT) with a pressure of -120 mmHg, associated with a Hyperbaric Oxygen Therapy (HBOT) protocol. During treatment, the patient underwent 5 full TPN changes and completed 29 HBO sessions, associated with antibiotic therapy. The evolution of the wound bed was favorable, allowing bilateral muscle flap rotation by the plastic surgery team on 11/28/2024 followed by medical discharge.

**Results:** The patient showed positive progress after multidisciplinary care with surgical interventions and technological treatment, resulting in wound healing and overall recovery, culminating in medical discharge.

**Conclusion:** The clinical management of this case illustrates the importance of a multidisciplinary approach in complex wound healing. The combination of surgical debridement, Negative Pressure Wound Therapy and Hyperbaric Oxygen Therapy proved to be effective in promoting mediastinal wound healing, resulting in full recovery of the patient. This case reinforces the need for well-structured protocols for wound management in patients with challenging health conditions. **Key words:** Surgical wound dehiscence; Hyperbaric oxygen therapy; Negative pressure wound therapy.



Figura 1 - 04/10/2024

Figura 2 - 25/10/2024

Figura 3 - 29/11/2024

Figura 4 - 20/12/2024

"I have no conflict of interest"

annafigueiredofernandes@gmail.com

Protected by Copyright – Reproduction Prohibited