



# TOPICAL OXYGEN THERAPY IN HARD-TO-HEAL WOUNDS IN CARDIAC SURGERY

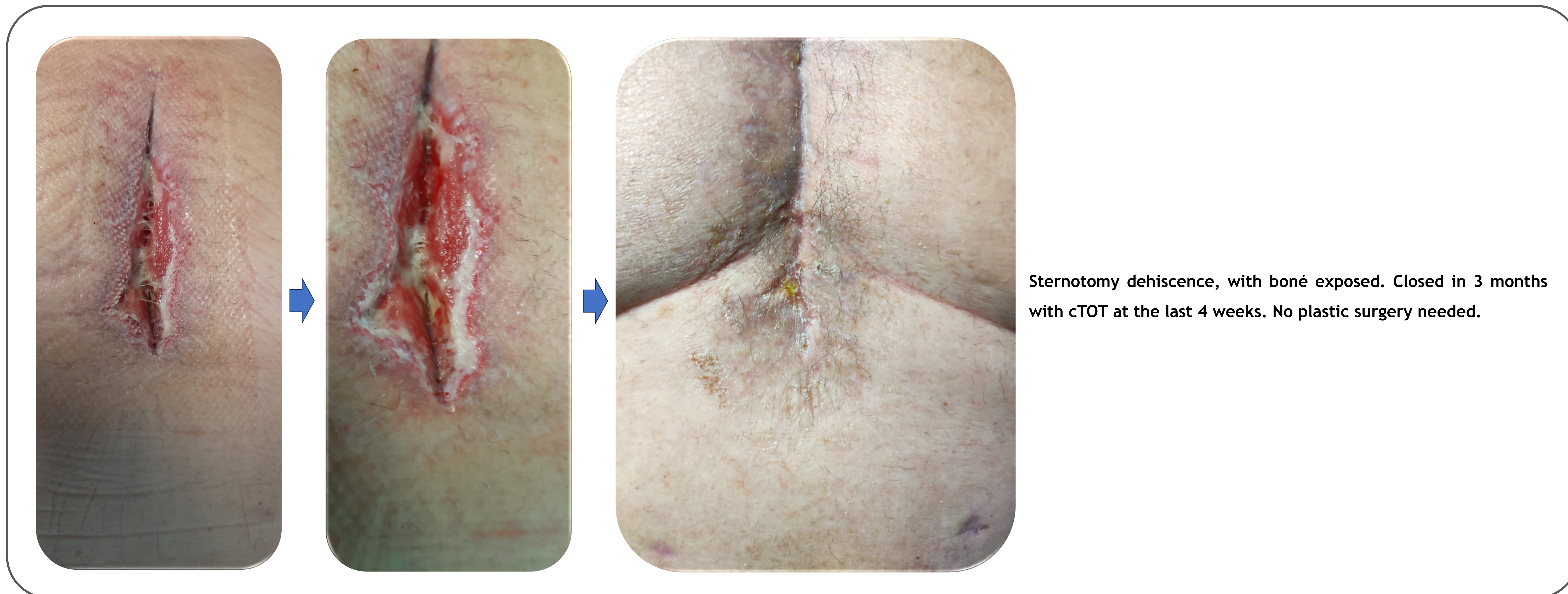
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GONÇALVES, VIVIANA<sup>1</sup>

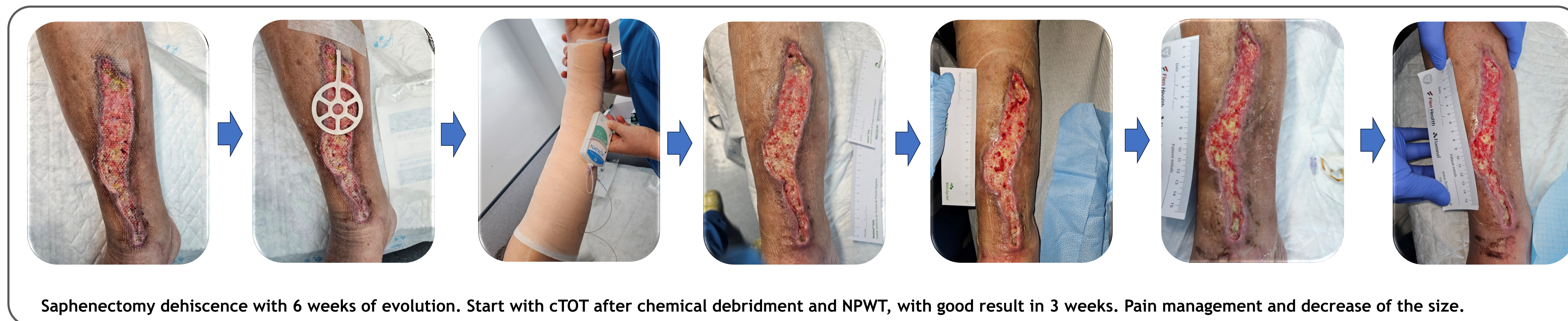
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1. TISSUE VIABILITY NURSE OF CARDIOTHORACIC SURGERY ; MSNs - CENTRO HOSPITALAR E UNIVERSITÁRIO SÃO JOÃO, PORTO, PORTUGAL

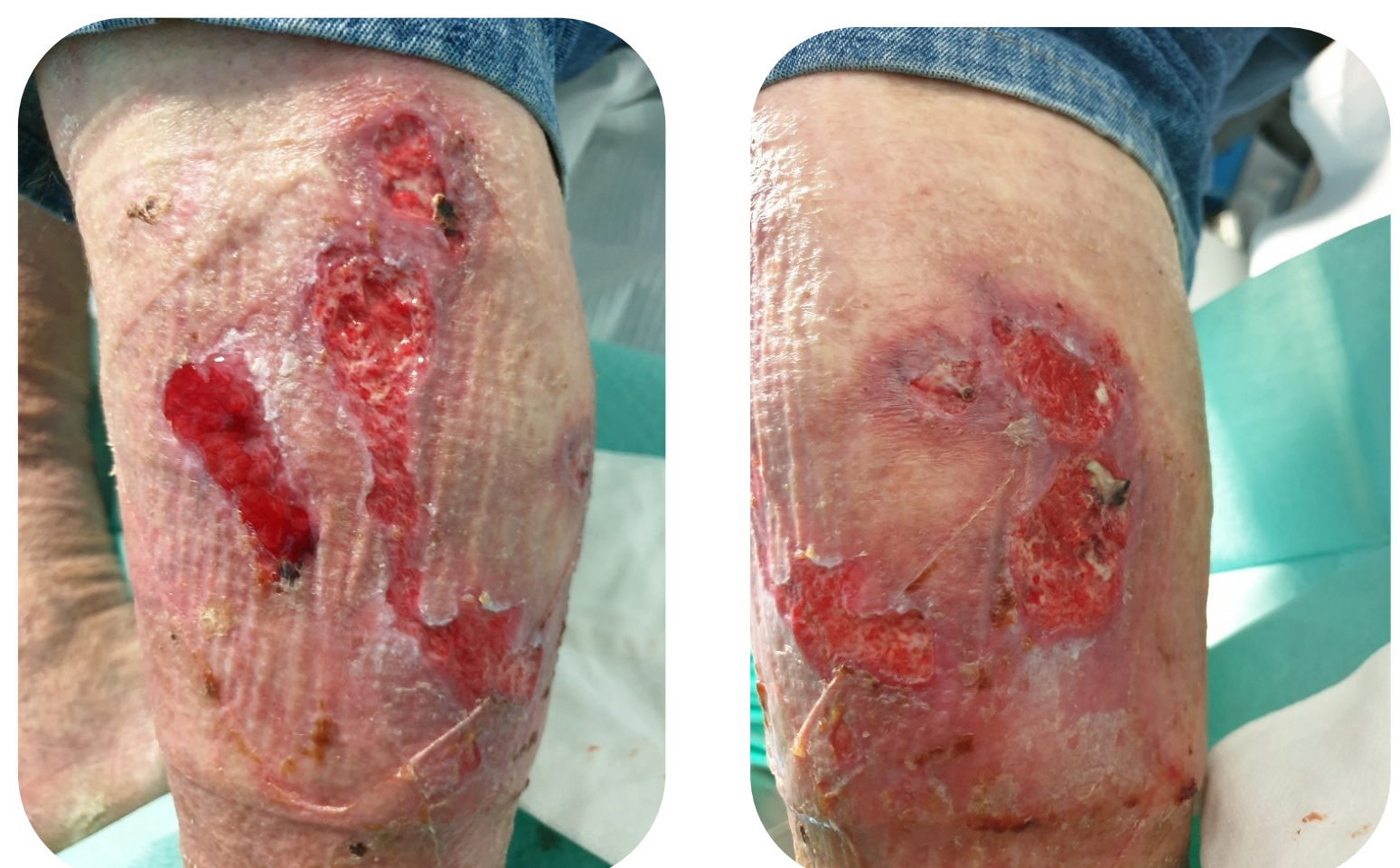
Oxygen is essential for healing. In chronic wounds, the need for oxygen increases by 50%, however hypoxia is substantial, promoting the proliferation of the bacterial load and consequent development of biofilm. In this way, healing is stagnant, prolonging the chronicity. Topical oxygen therapy in the wound bed controls the prolonged inflammatory process and boosts the healing process and can be used in long term chronic wounds and as an adjuvant therapy, with reduced pain during treatment and increased quality of life.



Sternotomy dehiscence, with boné exposed. Closed in 3 months with cTOT at the last 4 weeks. No plastic surgery needed.



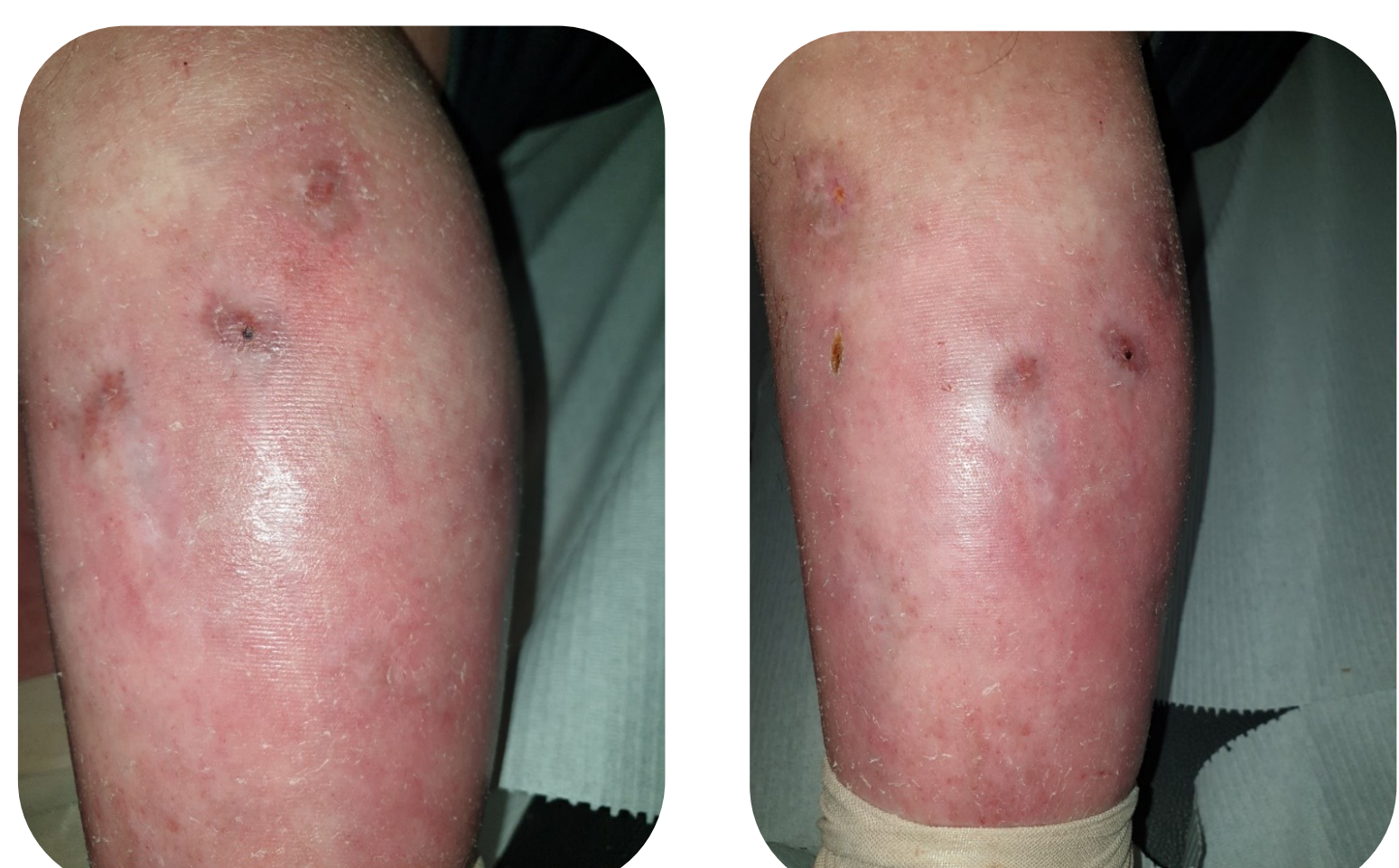
Saphenectomy dehiscence with 6 weeks of evolution. Start with cTOT after chemical debridment and NPWT, with good result in 3 weeks. Pain management and decrease of the size.



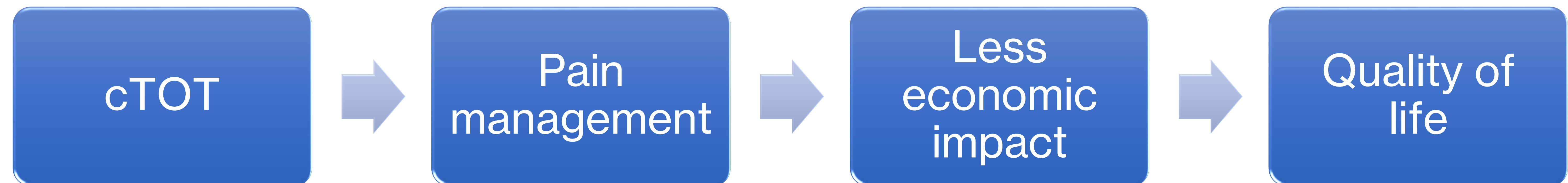
Leg ulcer with 5 years



1 month after start with cTOT and compression therapy. Cardiac Surgery!



2 months after surgery



Use of oxygen delivery device in the wound bed continuously, in pressure ulcers and leg ulcers with more than 6 months of treatment with various approaches. In leg ulcer it was applied with compression therapy.

In the first treatment cycle, there was a decrease in discomfort and pain, each cycle lasted 3 days in the first 2 weeks and in the following 5 days. Healing took about 4 weeks, without interurrences or side effects, in all wounds being treated. Patients with leg ulcers were awaiting healing for cardiac surgery and decreased risk of endocarditis. Two patients underwent to cardiac surgery 30 days after starting treatment.

Topical oxygen therapy effectively promotes healing. The fact of not having to carry out daily treatment and with a portable device makes its use easier and the patient's adherence to the treatment is effective. The cost-effectiveness of this therapy is positive, reflected in health gains for the patient and for health systems.

References  
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