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Multidisciplinary therapeutic protocol for pressure sores in severe spinal cord injury dogs

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BACKGROUND



The incidence of **pressure sores in severe spinal cord injury (SCI)** patients is high. Disuse musculoskeletal changes and secondary atrophy may lead to the development of pressures sores in both human and veterinary patients, **mostly in deep pain negative (DPN)** dogs, that are unable to respond to pain stimuli (*Agrawal and Chauhan 2012; Bhattecharya and Mishra 2015; Wake 2019; Gouveia et al. 2023*).



AIM

This prospective study aimed to estimate the incidence of pressure sores and their clinical evolution in SCI paraplegic dogs (n=488).

METHODS

- Arrábida Veterinary Hospital;
- Classified according with the presence and severity of recumbency ulcers in grade I, II, III or IV (*Davis 2011*) (Fig.1/2).
- Dogs with grade I/II → Treated with **standard care**
- Dogs with grade III/IV → Standard care + **surgical cleaning** and suture, followed by **hyperbaric oxygen therapy (HVM[®])** (Fig. 4)

Standard Care:

- ✓ Trichotomy;
- ✓ Cleaning and bandages with therapeutic honey/paraffine compresses;
- ✓ Class IV laser therapy (Fig. 3).



Figure 4 - Hyperbaric oxygen therapy performed on two dogs with pressure sores



2.4 - 2.8 ATA
5 sessions



Figure 3 - Class IV laser therapy on a pressure sore

RESULTS

The incidence of **pressure sores was 20.9%** (102/488), with 72 paraplegic DPN dogs. From these, **49 dogs were classified as grade I/II** and performed the standard treatment with **100% of recovery**, whereas **23 were grade III/IV**. From these critical patients, 2 were euthanized and **21 performed HBOT**, with **17 recovering between 14-30 days and 4 dogs needing more than 30 days**. Total recovery in DPN dogs was **95.83%** (69/72).

DISCUSSION AND CONCLUSION

HBOT may be considered an integrated therapy for grade III/IV pressure sores to accelerate process, mainly on DPN SCI patients.

