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APPLICATION OF **CAPACITIVE RESISTIVE MONOPOLAR RADIOFREQUENCY AT 448 kHz** IN THE **HEALING OF A CUTANEOUS WOUND** AFTER THE EXCISION OF A SOFT TISSUE SARCOMA

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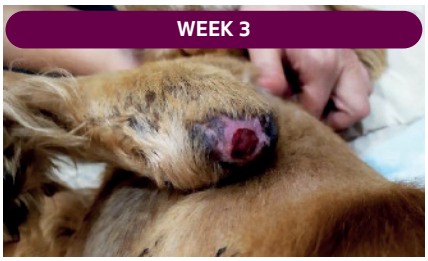
INTRODUCTION

A soft tissue sarcoma is a neoplasm derived from connective and subcutaneous tissues. Treatment requires resection with wide surgical margins.[1] **In the field of physical medicine, the radiofrequency 448 kHz electrical signal has been shown to act on cutaneous, epidermal and dermal regeneration processes**. [2,3]

CLINICAL CASE DESCRIPTION



A 14-year-old female Cocker Spaniel came to our clinic for excision of a mass at the elbow joint involving subcutaneous tissue.

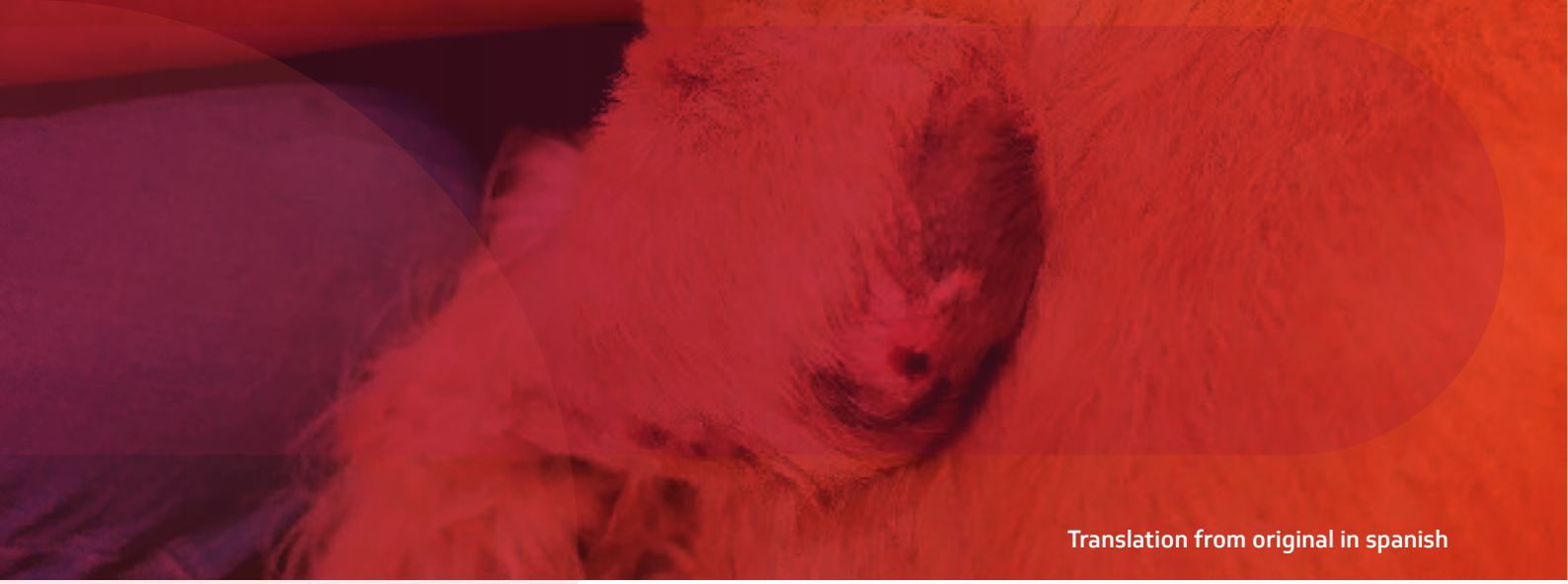
The mass was excised with wide surgical margins and a rotation flap was performed using the axillary fold, which failed after 10 days.

The histopathological diagnosis was a medium grade sarcoma, which was completely excised.

After 4 months seeking secondary intention healing, a treatment programme with capacitive resistive monopolar radiofrequency at 448 kHz was instituted.

Three sessions per week were performed at a **sub-thermal intensity** applied for 2 min with the capacitive electrode (CAP) and 8 min with the resistive electrode (RES) for **4 weeks.**

The wound healed completely after treatment.



Translation from original in spanish

DISCUSSION AND CONCLUSIONS

Soft tissue sarcoma is a neoplasm in which surgical margins are a predictive prognostic factor, with a need for them to be wide. In this case, complete excision without infiltration of the underlying tissues confers a favourable prognosis for the patient.[1]

Due to the skin defect that the patient presented following the failure of the rotation flap, and with no response to the treatments applied, physical therapies were considered for treating the skin defect.[4]

Radiofrequency at 448 kHz has been described as having the ability to stimulate stem cells at sub-thermal powers without significantly increasing tissue temperature, and is considered a safe therapy.[3,6,7,8]

There are also in vitro studies showing that it acts at the cellular and subcellular level by promoting **keratinocyte proliferation and migration, which supports the use of this therapy in skin regeneration and healing**. [2,5]

The treatment with currents of **radiofrequency at 448 kHz** are considered to be a growing physical therapy in the area of veterinary rehabilitation and **for which further studies are required** in order to develop protocols of application adapted to each type of injury. In this case, it has proved useful in a **skin healing** process after the excision of a soft tissue sarcoma.

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