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USE OF 448 kHz RADIO FREQUENCY FOR REABSORPTION OF CONTUSIONS

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INTRODUCTION

GREYHOUND, 2-year-old female. During a race, she collides frontally with an obstacle at high speed. The impact generates a haematoma in the area between the shoulder and elbow joint, affecting both the lateral and medial faces and part of the chest. She also presented with pain, swelling and ganglia enlargement of the regional lymph node (Figure 1).

As this is a sporting dog slated to compete in a race 7 days after the accident, administration of anti-inflammatory drugs is ruled out due to the risk of positive test results in *doping* controls.

OBJECTIVE

To reduce the pain and swelling and accelerate reabsorption of the haematoma to allow the patient to compete in next race.

MATERIAL AND METHODS

A device for generating Capacitive-Resistive Monopolar Radio Frequency at 448 kHz (VET 705, INDIBA® Animal Health, INDIBA S.A., Spain) is used. Application is performed using two types of electrodes: Capacitive (CAP) and Resistive (RES). The current emitted is received by the return plate that closes the circuit.

Three 25-minute sessions are scheduled over the course of four days. The regional lymph node was treated with thermal currents (which increase the local temperature of the tissues) to increase their drainage capacity, while the area of the injury was treated with subthermal currents (which do not increase the local temperature, thereby enabling the use of radio frequency on the acute inflammation).

As a complementary measure, it was recommended that the patient be kept very well hydrated to promote diuresis.

RESULTS

Twenty-four hours after the first application, marked improvement of the inflammation was observed, which was also reflected in a decrease in pain.

Twenty-four hours after the third and last session, near-complete reabsorption of the ecchymosis (Figure 2) was noted, this having disappeared almost completely 7 days after it was produced (Figure 3).

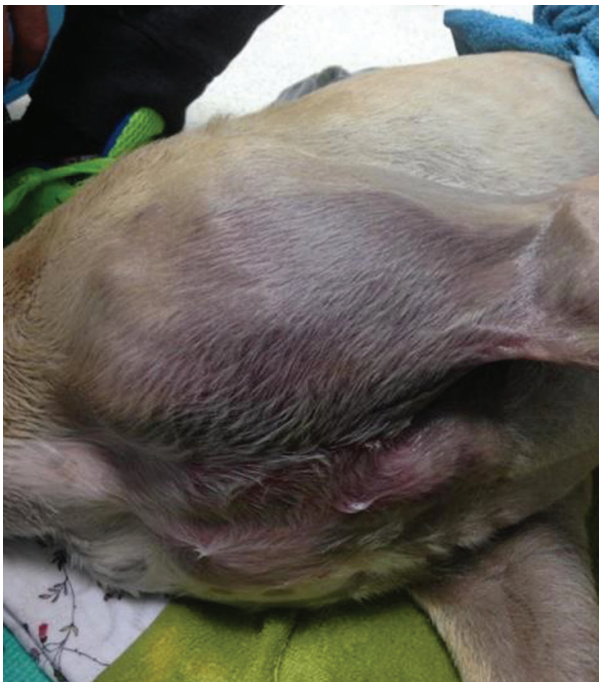

Figure 1. First day of treatment and 48 hours after injury.

Figure 2. Fourth day of treatment, before the third and last session. Traces of ecchymosis in areas of greatest declivity.

It should be noted that reabsorption was so rapid that it was not possible to discern the typical colour changes resulting from the breakdown of the extravasated haemoglobin in hemorrhagic contusions.

CONCLUSIONS

These case results suggest that Capacitive Resistive Monopolar Radio Frequency at 448 kHz represents a useful tool in the treatment of oedemas and contusions, both post-injury and post-surgery, to speed up of tissue healing. Further studies are needed to corroborate these results.

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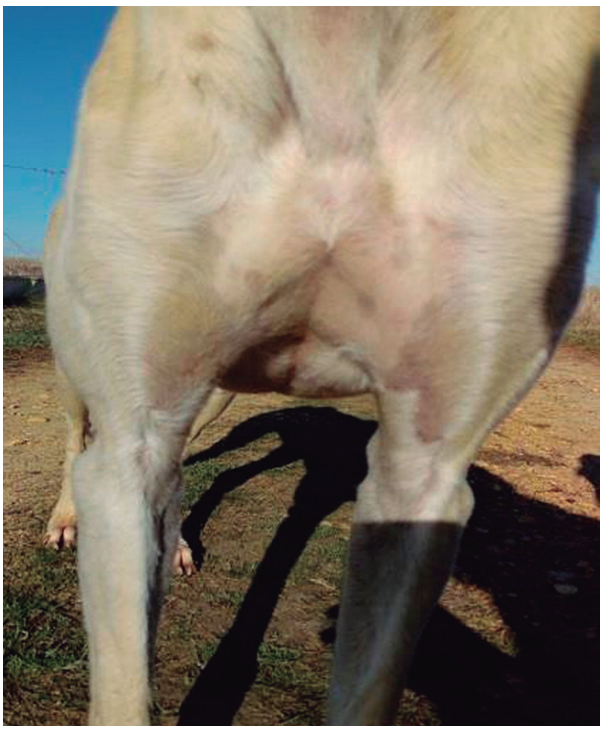

Figure 3. Seven days after the contusion, the injury is no longer visible, allowing the patient to compete in (and win) the race.