

# TREATMENT OF PAIN IN CANINE OSTEOARTHRITIS WITH RADIOFREQUENCY THERAPY AT 448 kHz: A COMPARISON OF 5 CLINICAL CASES



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## BACKGROUND

Pain associated to canine osteoarthritis (OA) has a strong impact on the patient's quality of life, and the difficulty to treat the condition can be further worsened by the impossibility of providing drug therapy, since these are often (though not exclusively) older individuals with possible associated systemic diseases.

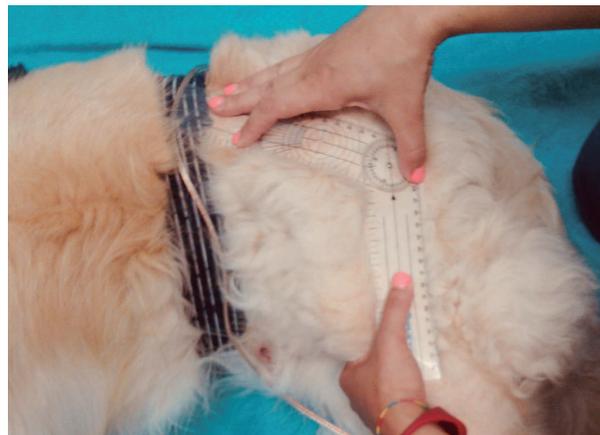
In human physiotherapy, radiofrequency is used as a technique for the treatment of general pain and rehabilitation [1, 2]. In management of osteoarthritis there is also extensive experience with radiofrequency as the main technique [3-5] that can justify its use in veterinary medicine.

## OBJECTIVE

To assess the effect of capacitive/resistive monopolar radiofrequency (CRMRF) at 448 kHz in the control of pain and stiffness in canine OA.



**Image 1.** Diagnostic images of canine osteoarthritis.



**Image 2.** Goniometric measurement in the diagnostic and exploratory phase.

## MATERIAL AND METHODS

A comparative evaluation was made of 3 large dogs (2 Golden Retrievers and 1 Labrador Retriever) and 2 very large dogs (1 Mastiff cross-breed and 1 Alaskan Malamute) - all with OA affecting one or more joints (coxo-femoral, knee, elbow), associated to pain and limited mobility.

The study group comprised two females and one male (all sterilised) and two non-sterilised males.

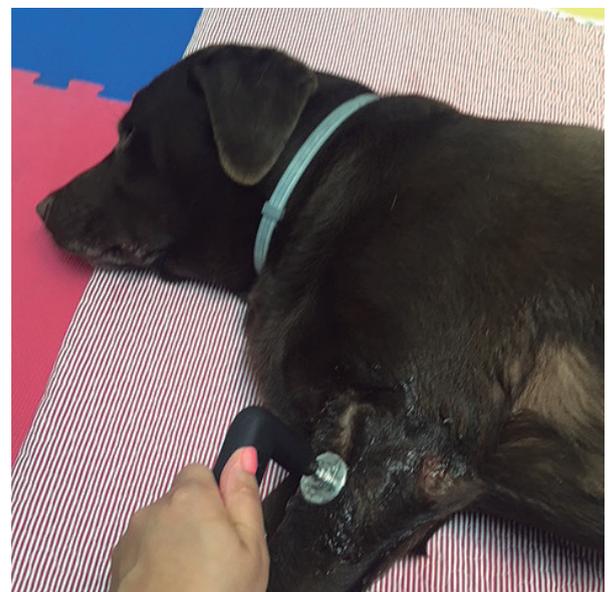
The diagnosis was established from X-rays (Image 1) and a detailed functional evaluation of each patient, including the goniometric measurement of the range of movement (ROM) of the affected joints (Image 2).

A monopolar radiofrequency current emitting system operating at 448 kHz (INDIBA® Animal Health [VET 705]) was used. The treatment was applied using two types of electrodes: capacitive (CAP) and resistive (RES).

### Treatment protocol:

Radiofrequency was applied around the affected joint and to its related muscles for 15 minutes (Image 3). The session ended with the RES electrodes applied for 2 minutes, keeping the electrode fixed distal to the joint in order to allow mobilisation of the latter.

The frequency was two weekly sessions in the first week, followed by a single weekly session for a total of four weeks.



**Image 3.** Application of radiofrequency therapy in RES mode in patient with OA.

## RESULTS

One month after treatment and a total of 5 sessions, all the patients showed clear clinical improvement, with an increase in the ROM of the affected joints of 10-15%. It should be mentioned that two of the owners already noted improved mobility and activity after the second treatment session. All owners noted a clear increase in the activity of their dogs after one month of treatment. One of them (Alaskan Malamute) was even “able to walk up stairs again”.

This technique was found to be safe and well tolerated by the patients, which were seen to be comfortable and relaxed during the sessions. No adverse events were recorded.

## CONCLUSION

The results of this preliminary study suggest that capacitive/resistive monopolar radiofrequency (CRMRF) at 448kHz could be a valuable tool for the control of pain and stiffness in canine OA. Further studies involving larger groups are needed to confirm these initial data.

## REFERENCES

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