A multiple session mesotherapy protocol for the management of hip osteoarthritis related pain in police working dogs

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OBJECTIVES:

To describe the use and effectiveness of mesotherapy in working dogs with hip osteoarthritis (OA).

MATERIALS AND METHODS:

Thirty dogs were assigned to a control group (CG, n=10) or a treatment group (MG, n=20). CG received a 70 day course of meloxicam, and MG was treated with a combination of lidocaine, piroxicam and thiocolchicoside;

The solution was injected in multiple intradermal points over the hip area, laterally and medially. Mesotherapy sessions were conducted once a week for four sessions, and every other week for three sessions.

Response to treatment, measured by the Canine Brief Pain Inventory (CBPI, divided in Pain Interference Score – PIS, and Pain Severity Score - PSS), Liverpool OA in dogs (LOAD) and the Hudson Visual Analogue Scale (HVAS), was evaluated before treatment, +15, +30, +60 and +90 days after initial treatment.

Results were analyzed with the Wilcoxon signed ranks test, and Kaplan-Meier estimators were conducted and compared with the Breslow test, with $p < 0.05$.

RESULTS:

No significant differences were observed between groups at the initial evaluation. Better results were observed in MG at +15d ($p=0.01$ for HVAS, and $p < 0.01$ for PSS and PIS), +30d ($p=0.04$ for HVAS, and $p=0.02$ for PIS, $p=0.03$ for PSS and LOAD), +60d ($p < 0.05$ for HVAS and LOAD, $p < 0.01$ for PIS and PSS) and +90d ($p=0.02$ for PIS and PSS).

Kaplan-Meier estimators showed significantly better results in the MG group.

No side-effects were recorded.

Kaplan Meier survival plot - LOAD

Kaplan Meier survival plot - PIS

IMPACT:

Mesotherapy may be a treatment option for canine musculoskeletal related pain, with maximum results obtained after the initial four sessions.