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A randomized blind placebo-controlled trial investigating the effects of photobiomodulation therapy (PBMT) on canine elbow osteoarthritis

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Materials/Methods: Dogs (n = 20) were randomly assigned to receive either PBMT (group PBMT; n = 11) 10 to 20 J/cm^2 or a placebo treatment (sham light group S; n = 9) treatment 0 J/cm^2, to both elbows for 6 weeks. Clinician Lameness score, Helsinki Chronic Pain Index scoring by blinded owner, and NSAID dose were recorded before and 7 to 10 days after last treatment by blinded study personnel.

Results: Reduction in NSAID dose occurred in 9/11 dogs in the PBMT group, and in 0/9 of group S dogs (P = 0.0003). There was greater improvement in lameness score in the PBMT group compared to S group (P = 0.001). A greater reduction in pain score was detected in 9/11 parameters/daily life functions in group PBMT compared to group S (P < 0.05), with the exception of mood (P=0.2) and vocal score (P=0.35) which did not differ between groups before and after treatment.

Discussion/Conclusion: Regularly scheduled PBMT at 10 to 20 J/cm^2 per joint for 6 weeks was successful in improving lameness and pain scores, and in lowering NSAID requirement in canine elbow osteoarthritis patients.