

Evaluation of prophylactic antibiotic treatment in dogs underwent tibial plateau levelling osteotomy

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Abstract

The clinical impact of postoperative treatment on infection rates in dogs underwent tibial plateau levelling osteotomy (TPLO) is still uncertain [1]. The aim of this study was to compare the surgical site infection rate in dogs underwent TPLO surgery in which perioperative antibiotic prophylaxis was performed, to those obtained in dogs treated with perioperative and post-operative antibiotic prophylaxis. The study protocol was approved by the Ethics Committee of the University of Teramo (Prot. 24520 UNTECLE). Criteria included dogs underwent TPLO surgery for CCLd and then divided into two groups: group A, cefazoline (22 mg/kg IV) administration preoperatively and group B, cefazoline (22 mg/kg IV) preoperatively followed by post-operative treatment (cefazoline 22 mg/kg sid os) for ten days after surgery. Each dog underwent routine affected leg clipping and aseptic surgical site preparation (Clorexidine 4%). All TPLO procedures were performed by the same surgeon (RT). Deep intraoperative surgical swab was performed at the end of the procedure. Wound care, including three times a day Clorexidine application and three times a day ice-pack therapy 5 minutes each, was carried out by the owners for twelve days after surgery. Post-operative recheck were performed fourteen days, four and eight weeks postoperatively. In case of pain, swelling, incisional drainage or incisional dehiscence were mentioned, or if a bacterial culture of the surgical site showed evidence of bacterial growth, the dog was considered as having a surgical site infection [2]. If no abnormalities suggesting an SSI were mentioned in the patient record from the post-surgical follow-up visit and evidence of radiographic osteotomy healing was achieved, the surgical site was considered as not infected. Statistical surgical site infection rate was compared between the two groups using a commercial available software ($p < 0.05$). Ninety-four dogs (112 TPLOs) met the inclusion criteria. Group A: Forty-three dogs (51 TPLOs); group B: fifty-nine dogs (sixty-one TPLOs). The overall complication rate was 2/51 (3,9%) in the group A and 2/61 (3,2%) in the group B. No implants were removed. No statistical difference was achieved between the two groups ($p > 0.05$). According with our results, perioperative antimicrobial prophylaxis is sufficient to maintain the overall rate of SSI at a level similar to those obtained in dogs underwent post-operative antibiotic treatment.

Keywords: perioperative antibiotic treatment, TPLO, dog

References

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