



Portorož, 31.3. – 1.4.2017

ZBORNİK REFERATOV

# XXX. SIMPOZIJA

*o aktualnih boleznih malih živali*

Univerza v Ljubljani  
Veterinarska fakulteta



THE FEDERATION OF EUROPEAN COMPANION  
ANIMAL VETERINARY ASSOCIATIONS

## SAFETY AND EFFICACY OF INTRAOPERATIVE ELECTROCHEMOTHERAPY OF SOFT TISSUE SARCOMA IN 26 DOGS

Ron J Lowe<sup>1</sup>, Filippo Torrigiani<sup>2</sup>, Alessio Pierini<sup>2</sup>, George Lubas<sup>2</sup>

<sup>1</sup> Ashleigh Veterinary Clinic, Knaresborough, North Yorkshire, UK

<sup>2</sup> Veterinary Teaching Hospital, Department of Veterinary Sciences, University of Pisa, Via Livornese lato monte, Pisa, Italy  
pippotorigiani@hotmail.it

Soft Tissue Sarcomas (STS) represent 15% of all skin and subcutaneous tumours in dogs. Local tumour control with wide margins surgery or a combination of surgery and radiation therapy is the standard of care in the management of these tumours. Electrochemotherapy (ECT) is a local ablative technique for the treatment of locally invasive tumours.

The aim of this study was to evaluate the safety and efficacy of intraoperative ECT in the treatment of STS in dogs.

Twenty-six dogs with a diagnosis of STS were enrolled. All dogs were treated with cytoreductive surgery with very narrow or zero margins and intraoperative electrochemotherapy coupled with systemic bleomycin. Local toxicity, tumour recurrence rate and disease free interval (DFI) were evaluated.

Most tumours were grade II (15/24), and most commonly located to the limbs (19/26). Tumour size ranged from 2 to 15 cm (median 4.75 cm). Median follow-up period was 422.5 days (range 8-1297). Treatment toxicity was well tolerated in 62% of cases (16/26 had toxicity score  $\leq 2$  in a scale of 5 as maximum) and was not associated with tumour grade, tumour size, pulse frequency and pulse voltage.

Nine dogs died during the study period, three had tumour recurrence, which was the reason for euthanasia in two cases. Of the other 17 dogs, three had tumour recurrence and in one case the limb affected was amputated as rescue treatment. Overall, tumour recurrence rate was 23% (6/26). Recurrence rate was not associated with tumour grade, anatomical site, tumour size, pulse frequency and pulse voltage. For all dogs, median DFI was not reached. For dogs with tumour recurrence, mean DFI was 240 days (range 26-1025).

Intraoperative electrochemotherapy coupled with systemic bleomycin has been well tolerated but its overall efficacy needs further investigations.