The *in vitro* antimicrobial activity of triclosan coated polydioxanone suture material on bacteria commonly isolated from canine wounds

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OBJECTIVES

1. To determine the *in vitro* effects of triclosan coated (PDS Plus®) and non-coated (PDS II®) suture material on bacterial growth
2. To determine the *in vitro* duration of bacterial inhibition of PDS Plus® suture

METHODS

10 clinical isolates of *Pseudomonas aeruginosa*, *Staphylococcus pseudintermedius*, methicillin-resistant *S. pseudintermedius* (MRSP), *Escherichia coli*, and extended spectrum beta-lactamase (ESBL)-producing *E. coli* plus appropriate National Collection of Type Cultures controls. Isolates were incubated with PDS Plus®, PDS II®, an antibiotic disc of known efficacy, and a negative control following EUCAST guidelines. The zone of inhibition (ZI) around the suture material and antimicrobial discs was recorded. Sustained efficacy assays were performed as above (excluding *P. aeruginosa*), moving the suture material to a fresh culture every 24 hours.

RESULTS

ZIs were seen around PDS Plus® but not PDS II®. Confluent growth occurred with all the *P. aeruginosa* isolates. ZIs were seen with PDS Plus® for 20 days with *S. pseudintermedius* and MRSP, 15 days for *E. coli*, and 11 days for ESBL-*E.coli*.

STATEMENT (CONCLUSIONS)

PDS Plus® exhibits sustained *in vitro* antimicrobial activity against *S. pseudintermedius*, MRSP, *E. coli* and ESBL-*E. coli*. PDS Plus® could therefore reduce the prevalence of these wound infections in veterinary patients, although further studies are required to confirm this *in vivo*.

A comparison of the rates of postoperative complications between dogs undergoing laparoscopic and open ovariectomy

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OBJECTIVES

To test the hypothesis that dogs undergoing laparoscopic ovariectomy have a lower overall and wound-healing complication rate than dogs undergoing an open surgical approach.

METHODS

A retrospective study of dogs who underwent ovariectomy between January 1st 2013 and January 1st 2018. Cases were all operated on by the same team of similarly experienced surgeons using standard, practice anaesthetic, theatre and perioperative protocols. General complications were recorded, and graded using the Clavien-Dindo system. Complication rates were compared between the two groups of dogs. Wound complications were further subdivided using CDC guidelines into inflammation only, superficial SSI and deep SSI categories. Rates of wound dehiscence were also recorded.

RESULTS

Using strict definitions and adhering to the Clavien-Dindo system, 44.3% of 106 dogs undergoing open ovariectomy developed a recorded complication. 30 dogs (28.3%) had wound healing complications the majority of which were minor and self limiting. Superficial SSI was seen in 4.7% cases and deep SSI in 0.9%. Incisional herniation occurred in 3.7% cases.

20.1% of 154 dogs undergoing laparoscopic ovariectomy developed a recorded complication. 11% developed wound healing complications most of which were minor and self limiting. The rate of superficial SSI was 3.2% with no cases of deep SSI recorded. No incisional herniation occurred in any laparoscopic cases.

STATEMENT (CONCLUSIONS)

Laparoscopic ovariectomy is associated with a decreased risk of postoperative complication and SSI compared to open ovariectomy. Laparoscopy should be considered the approach of choice when performing ovariectomy in dogs.

Incidence and risk factors for post-attenuation neurological signs in 50 cats with a single Congenital Portosystemic Shunt

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OBJECTIVES

To determine the incidence, outcome, and risk factors for post attenuation neurological signs (PANS) and seizures after attenuation of single congenital portosystemic shunts (CPSS) in cats.

METHODS

Medical records of cats treated at a single institution by surgical attenuation of a single CPSS between 2003

and 2017 were reviewed for signalment and preoperative and postoperative clinical outcomes, including the occurrence of PANS and seizure activity. Binary logistic regression was performed to investigate risk factors.

RESULTS

Fifty cats undergoing surgical CPSS attenuation were included (80% extrahepatic, 20% intrahepatic). Eleven (22%) of cats had complete attenuation, 39 (68%) had a partial attenuation. Thirty one (62%) cats suffered PANS, including 11 (22%) cats that experienced seizures. Of the 31 cats that suffered PANS, 5 (16.1%) did not survive to discharge.

There were no significant associations between PANS or seizures and the type of CPSS, degree of attenuation, age, the use of pre-operative anti-seizure medication or the presence of HE immediately before surgery. Osmolality at time point 3 (median 24 hours) was lower in cats with PANS and this was a significant risk factor (p = 0.049, odds ratio 0.855).

STATEMENT (CONCLUSIONS)

PANS is a significant complication and cause of mortality in cats treated surgically for CPSS. Peri-operative levetiracetam did not seem to protect against the development of PANS. Postoperative changes in osmolality were associated with the development of PANS. Further studies are required to determine the importance of this finding.

Thoracic dog bite wounds: a retrospective study of 123 dogs (2003–2016)

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OBJECTIVES

To compare clinical findings, investigate indications for thoracotomy and identify factors associated with outcome in dogs with thoracic dog bite wounds.

METHODS

Medical records of dogs with thoracic dog bite wounds presenting to a single institution were retrospectively reviewed. Data relating to clinical presentation, wound depth and management, radiographic findings and mortality were collected. Wound management was defined