Could patient-side Gram-staining improve antibiotic choice before culture and sensitivity results are available in small animal surgical cases with suspected surgical site infection?

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OBJECTIVE

To determine which antibiotic(s) would be most likely to effectively treat future surgical site infections (SSIs) before culture and sensitivity results are available in those cases, and to determine whether patient-side Gram-staining of future samples would improve the likelihood of treatment success.

METHODS

Surgical records from between August 2014 and August 2015 at a single multidisciplinary small animal referral hospital were retrospectively reviewed for reported SSI. Cases where no growth was reported were excluded. Organism identified, Gram-status, and antibiotic sensitivity were recorded and compared in cases where organisms were cultured.

RESULTS

SSI was reported in 16/882 (1.8%) of cases treated surgically during the study period. Of these, 13 yielded positive bacterial cultures, and the antibiotic that would have effectively treated most cases pre-culture and sensitivity result was co-amoxycyclav (10/13, 76.9%). When split for Gram-status, Gram-positive bacteria were most often sensitive to co-amoxycyclav (7/7 (100.0%)) and erythromycin (7/7 (100%)), and Gram-negative bacteria were most often sensitive to marbofloxacin (5/6 (83.3%)) and trimethoprim/sulfadiazine (5/6 (83.3%)) compared to 3/6 (50.0%) for co-amoxycyclav.

STATEMENT

Patient-side Gram-staining is recommended for future suspected SSI cases at this hospital as it may allow for a more targeted pre-culture and sensitivity treatment choice. By regularly reviewing clinical records in individual practices, clinicians may identify similar trends that allow more targeted pre-culture and sensitivity antibiotic therapy in future cases of SSI.

Clinical features of methadone constant rate infusions in 383 dogs and cats

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OBJECTIVES

To describe the clinical features – indications for use, rates of infusion, perceived effect on pain levels, and side effects – of methadone constant rate infusions (CRIs) in dogs and cats in a first-opinion charity hospital over the last two years.

METHODS

Retrospective analysis of clinical histories of 152 dogs and 230 cats that received a methadone CRI.

RESULTS

The most common indications were trauma (67% of dogs, 80% of cats) or orthopaedic surgery (22% of dogs, 16% of cats). Most animals were given a loading dose of methadone (median 0.4mg/kg, range 0.2–0.8mg/kg) followed by CRI (median 0.1mg/kg/hr, range 0.05–0.2mg/kg/h). The effect on pain levels were judged clinically to be excellent (83% of dogs, 91% of cats) or very good (15% of dogs, 6% of cats). Side effects were rare in dogs, in the main being linked to nausea or vomiting. Cats frequently (42%) showed dysphoria, leading to a reduction in dose or cessation of the CRI. No side effects of mental or cardiorespiratory depression were seen in any animal.

STATEMENT

Methadone CRIs can provide excellent analgesia in hospitalised dogs and cats that are experiencing, or likely to experience, severe pain. Side effects appear mild and responsive to a reduction in dose; serious side effects were not documented in this study.

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