

Quick Tips – Surgery

Cheri Nielsen, DVM, MS, DACVS

Surgical Treatment of Canine Pyothorax

Pyothorax in dogs is thought to be secondary to aspiration of grass awns or other plant material. This contrasts to feline pyothorax, which is most likely a sequela of thoracic bite injury (and is generally responsive to medical therapy alone). *Corynebacteria spp* and the gram-positive filamentous rods *Actinomyces* & *Nocardia spp* are commonly isolated from pleural fluid in affected dogs, in addition to typical aerobic and anaerobic bacteria (**“Sulfur granules” in the pleural fluid generally indicate filamentous bacteria, and granules should be included in the culture sample to increase diagnostic yield**). 50% of affected dogs have multiple organisms present. Treatment options include medical management alone (aggressive supportive care, thoracostomy tube drainage, IV antibiotics) or surgical intervention (median sternotomy for open debridement and lavage, with lung lobectomy if indicated) followed by continued medical treatment. **A recent study found that disease recurrence was 5 times more likely in dogs treated without surgery.** Outcome was better after early surgical intervention, particularly in dogs with radiographic evidence of mediastinal or pulmonary lesions or presence of *Actinomyces spp* in the pleural fluid. Dogs infected by filamentous bacteria nearly always have a large granulomatous mass within the mediastinum that is debrided at surgery. Although rarely identified at surgery, it is thought that plant material incites the inflammatory reaction, and removal of this tissue improves the effectiveness of medical treatment. Long-term treatment with ampicillin (*Actinomyces spp*) or potentiated sulfonamides (*Nocardia spp*), with length of therapy determined by follow-up thoracic radiographs, is indicated to minimize the chance for recurrence when either organism is demonstrated or strongly suspected.

I hope you found this information helpful,



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& SPECIALTY CENTER OF MARIN

901 East Francisco Blvd.
San Rafael, CA 94901

415.456.7372
www.pescm.com