

# Use of Meloxicam in a Case of Septic Arthritis and Arthrotomy in a 6-week-old Bull Calf

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A six week old Holstein bull calf, previously treated at Cornell's Large Animal Hospital for pneumonia and omphalophlebitis associated with failure of passive transfer (FPT), returned 3 days later with a primary complaint of lameness and reluctance to rise. At presentation, physical examination showed mild effusion in the left carpus, increased lung sounds bilaterally and a thickened umbilical stalk. Differentials for arthritis in a calf include septic and non-septic etiologies. Septic arthritis is a common sequela to FPT while non-septic causes include both traumatic and degenerative disease.

Preliminary bloodwork showed a neutropenia, while ultrasound examination of the thorax and abdomen showed persistent pleural pneumonia and hyperechoic foci within the umbilical arteries. Joint fluid from the left carpus yielded results most consistent with traumatic or degenerative arthropathy. During the course of his hospitalization, the calf subsequently developed unequivocal signs of septic arthritis in his left stifle which ultimately required an arthrotomy to resolve. As part of a multimodal approach to pain management, meloxicam was included as adjunctive therapy.

Meloxicam is a non-steroidal anti-inflammatory drug (NSAID) of the oxicam class. Like others of its type, meloxicam's anti-inflammatory and analgesic effects are mediated through inhibition of cyclooxygenase (COX), the enzyme responsible for catalyzing reactions necessary for the conversion of arachidonic acid to various prostaglandin products. Recent research has shown meloxicam to have several potential advantages over flunixin meglumine, the NSAID most commonly used in cattle, including excellent bioavailability following oral administration and a much longer half-life. However, because meloxicam is not labeled for use in food-producing animals, the implications of extra-label drug use must be carefully considered.