

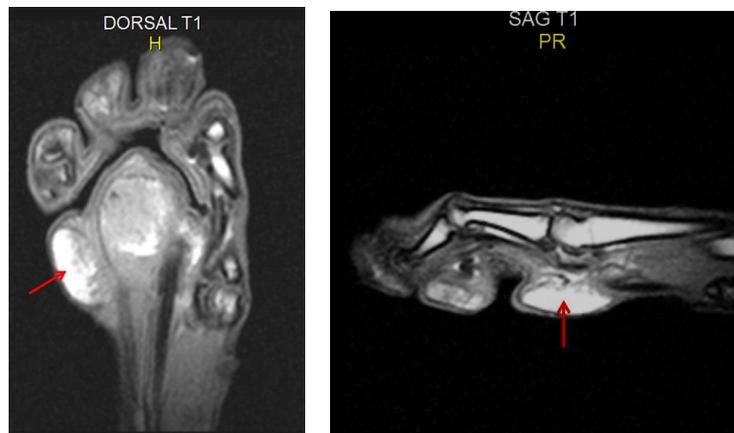
MRI Case Study

Species: Dog **Age:** 2Yr 5Mo **Gender:** Male **Breed:** Beauceron **Weight:** 45.00 Kg

Summary: This patient competed in the Westminster Dog Show on February 10th, 2017 and came up lame on the LF leg shortly thereafter. At first it seemed to be shoulder related lameness. Patient was seen at his rDVM and had 4DX done, and tested positive for Lyme and anaplasma (treated on a 30 day regimen of doxycycline with no improvement in lameness). At the end of March the patient was still lame even on carprofen and upon investigation the owner found pus leaking from metacarpal pad. He was seen at his rDVM again who confirmed infection and treated on a 10 day course of clindamycin purulence which made some improvement but the lameness persisted.

Beginning in April the patient started to become intermittently non weight bearing after activity. The owner noted fluid not pus coming from metacarpal pad at this time, no pocket appreciated upon examination at the rDVM. Radiographs were taken by the rDVM which showed inflammation on the fourth digit of LF paw; at that point advanced imaging was recommended to rule out foreign body. April 18th the patient became completely non weight bearing on the LF leg—exam revealed consistent pain on palpation proximal 4th digit/distal 4th metacarpal LF. Fine needle aspiration revealed mixed inflammation with no infectious organisms appreciated. Started on gabapentin and carprofen and has had some improvement in lameness but digit remains swollen and painful on palpation.

Left Manus MRI: Axial plan STIR, T2-weighted and proton density images are provided. Sagittal and dorsal plane STIR and T1-weighted images were also acquired. Dorsal plan 3-D T1-weighted images are also provided, for a total of 218 images.



Findings: There is a linear gas-filled tract within the distolateral aspect of the metacarpal pad. There is an approximately 1.5 cm, curvilinear structure in the dorsomedial aspect of the metacarpal pad, residing palmar to the 3rd interdigital space, best seen on the 3-D sequence. There is ill-defined hyperintensity within the mid to lateral aspect of the metacarpal pad on all sequences, extending dorsally to surround the distal aspect of the 4th metacarpal bone and 1st and 2nd phalanges of the 4th digit. No significant osseous abnormalities are identified.

Conclusion: Foreign body in the dorsomedial aspect of the left metacarpal pad with regional cellulitis and draining tract in the distolateral aspect of the metacarpal pad.

Outcome: Surgery was performed on the left metacarpal pad and a 1.7 cm piece of glass was removed. The patient has made a full recovery. The MRI exam was helpful in predicting what the foreign body was and its location, thus reducing the amount of exploratory surgery necessary to resolve this case.