

**ACVR CT/MRI society – Case of the Month
August 2019**

This month's case was provided by:

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- Signalment: 11 week old female German Shepherd

- History:
 - Acute onset of pyrexia and lameness 3 days prior to MRI, progressed to paresis of the of the pelvic limbs worse on the left, extremely painful in lumbosacral region. Patient was adopted 8 days prior to onset of signs, with mild diarrhea noted at that time.
 - Differentials – meningomyelitis, infection (toxoplasma/neospora, viral, bacterial), discospondylitis. Plan for MRI.
 - Mentation: Quiet, responsive
Gait and posture: Ambulatory paraparesis, worse on the left, possibly associated with a weight-bearing lameness of the same limb. No ataxia noted
Cranial Nerves: Normal
Postural reactions: delayed on both pelvic limbs, worse on the left
Spinal reflexes: delayed flexor reflex on the left pelvic limb, mainly distally
Nociception: Normal in all four limbs, perineal area and tail
Pain: Reacted upon palpation of the lumbosacral area both on the dorsal spine and ventrally (via the rectum).
 - Patient lives with 7 cats and one other dog.

- Study performed:
 - Thoracolumbar MRI

- Findings:
 - Centred around the left sacroiliac joint, there is an amorphous region of heterogeneous T2 hyperintensity that extends cranially within the left iliopsoas muscle to the level of the fifth lumbar vertebra and caudally within the coccygeal and gluteal musculature to the caudal aspect of the hip joint. These associated muscles are moderately enlarged as compared with the contralateral side. The left L7-S1 intervertebral foramen is widened and has surrounding T2 hyperintensity. Within the left sublumbar region, there is an irregularly marginated mildly T2 hyperintense mass that laterally deviates the left iliopsoas muscle and displays no central contrast enhancement. Within the left sacrocaudalis dorsalis lateralis muscle and extending laterally into the gluteus superficialis, there is a focal T2 hyperintense region with a distinct fluid line.
 - At the caudoventral aspect of the sacroiliac joint within the ilial body there is a focal region of T2 hyperintensity and loss of subchondral bone.
 - The left medial iliac lymph node is moderately enlarged (13.7 mm x 7.7 mm) as compared with the right (9.8 mm x 5.1 mm) and the inguinal lymph nodes are moderately enlarged (left 14.1 mm x 5.7 mm and right 4.8 mm x 10 mm).
 - No other substantial abnormalities are identified.
- Conclusions:
 - 1. Left dorsal gluteal abscess with sublumbar necrotic mass and marked surrounding cellulitis/myositis.
 - 2. Secondary infectious sacroiliitis and ilial osteomyelitis, left.
 - 3. Left lumbosacral intervertebral foraminal enlargement with surrounding inflammation.
 - 4. Moderate left medial iliac and inguinal lymphadenopathy.
 - The constellation of findings is most consistent with an abscess and marked cellulitis/myositis. A penetrating foreign body or less likely hematogenous infection cannot be ruled out. The sacroiliitis and osteomyelitis is suspected to be secondary to the adjacent abscess and is likely contributing to some of the reported pain, as well as the abscess and myositis/cellulitis.
- Outcome/Follow up:
 - Fine needle aspiration of an echogenic region in the left gluteal musculature was performed and approximately 2ml of cloudy sanguinous fluid was removed.
 - Cytology - Five direct smears of material from a suspected abscess were examined. The slides contained proteinaceous, mildly hemorrhagic backgrounds with large numbers of inflammatory cells. A predominance of lytic neutrophils was noted (approximately 95% of total cells) with remaining cells composed of macrophages. Occasional cytophagia was evident. No etiological agents were identified.

Interpretation: Marked suppurative inflammation. Bacterial culture and susceptibility are indicated.

No aerobes or anaerobes isolated.

- Abscess suspected to be secondary to a cat bite, even though no skin puncture sites were found.
- Antibiotics started for at least 4 weeks (Amoxicillin and Clindamycin)
- No further follow up.

- Comments:
 - Infection of the sacroiliac joint is a rare finding, and is typically secondary due to spread from nearby infection/abscess, but can be a primary site of infection. Treatment would be similar to any other septic arthritis with long term (4-6 weeks) antibiotics suggested. (Ref)

- References:

Robert Slater, Alex zur Linden, Fiona James. Diagnostic imaging characteristics of canine infectious sacroiliitis. Can Vet J 2019; 60:630-636.