

Raven's Raging Sinuses

Abstract: A case of adult equine bacterial meningitis following treatment of chronic bilateral sinusitis and tooth root abscesses.

History: Raven was seen by the Auburn University Large Animal Teaching Hospital in July 2018 for malodorous right sided nasal discharge. This was suspected to be secondary to sinusitis caused by a tooth root abscess. A standing head computed tomography (CT) was performed where it was confirmed that she had a right sided sinusitis with fluid accumulation and abnormal tooth roots of 109. It was recommended that Raven have tooth 109 extracted and a sinus trephination or flap performed to lavage the purulent material. The owner elected conservative treatment with no tooth extraction. A right frontal sinus trephination was done to obtain a culture of the material and test for antibiotic sensitivity. The right sinuses were lavaged for several days and Raven was sent home on an extended course of Trimethoprim Sulfamethoxazole (TMS).

Presentation: In May of 2019, Raven presented with a, now, 10 month history of unresolved sinusitis. The owner stated that while she was on TMS, no discharge or odor was noted but once taken off medications, the malodorous right sided nasal discharge would return. It was also noted by the owner that she seemed to be painful while eating and had started head shaking. On presentation, her vital parameters were within normal limits with a heart rate of 44 bpm, respiratory rate of 16 brpm, and temperature of 100.8 F.

It was recommended that new images be obtained. New radiographs confirmed that the right sided sinusitis and 109 tooth root abscess were still present. Additionally, a left sided sinusitis was diagnosed. Treatment recommendations included extraction of 109, possible extraction of 210, bilateral frontal sinus trephinations, and antibiotics. The owner agreed and the 109 tooth extraction and bilateral frontal trephination were performed May 21st-22nd, 2019.

May 22nd-day 1 post-op: Tachycardia, antibiotics and nonsteroidal anti-inflammatories

May 23rd- day 2 post-op: Tachycardia continued, gastro protectant added

May 24th- day 3 post-op: Pyrexia, increased white blood cell count on complete blood count (CBC)

May 25- day 4 post-op: Pyrexia continued, decreased appetite, ultrasonography revealed changes on the cranioventral lung fields, additional antibiotics added to medications

May 26th- day 5 post-op: Pyrexia reached a new high, ice boots were placed prophylactically, intravenous catheter was placed, left trephination drain was removed and closed, antibiotics, NSAIDS, and gastro protectants were changed

May 27th- day 6 post-op!: Neck extension, pain/stiffness and wide stance noted, cervical radiographs performed with no noted abnormalities, cerebral spinal tap performed, changed 1 antibiotic

May 28th-day 7 post op: Neck pain still present, dull and depressed demeanor, steroids given

May 29th-31st: treatments remained the same, neck pain slowly improved and Raven began to put her head to the ground and turn side to side

June 1st- day 11 post-op: able to drop head to eat from the ground, overall brighter and more comfortable, discontinued 1 antibiotic

June 2nd- 6th: decreased medications in this time frame to 1 antibiotic to go home on

June 7th- day 17 post op: extraction of 210 after a repeat standing head CT

June 10th- day 20 post op: repeat left frontal trephination and sinoscopically guided fenestration of the left maxillary septal bulla performed to lavage the inspissated material seen on radiographs and CT

June 11th- day 21 post op: received successful lavages twice daily

June 12th- day 22 post op: sinus lavaged clear and drain pulled

June 13th- day 23 post op: DISCHARGE day!

Raven was discharged on oral antibiotics for 14 days. She continues to do well at home, has stopped the head shaking and is eating normally. The owners plan to start riding her again this fall.