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# Neurology

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# Chief Complaint

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- “Tess is a 12 year old German Shepherd that suddenly fell over and then had difficulty getting up. When she did eventually stand and attempted to walk she was very ataxic and vomited twice.

# Tess



# History

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- Suddenly fell over and had difficulty rising
- When she did get up she was ataxic
- She demonstrated a left head tilt
- Walks in circles – circling to the left
- Appetite normal
- Seems bright and alert

# Physical Examination

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- Bright, alert, responsive (BAR)
- Temperature 38.8 degrees C
- Heart Rate 90 bpm
- Respiratory Rate – 16 per minute
- Walking – circles to the left with left head tilt
- Proprioception normal
- Nystagmus – horizontal - fast phase to the right
- Seems to be disorientated
- Tympanic membrane intact no signs of infection

# Video of our dog

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- <https://www.youtube.com/watch?v=IP5e12U8ePY&t=72s>

# Rule Outs

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- List all the Possible Diagnoses
- *This list is your Rule Out list*

# Rule Outs

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- Otitis Media and interna
- Ototoxic drugs
- Trauma
- Hypothyroid neuropathy
- Geriatric Vestibular Disease
- Brain neoplasia
- Hepatoencephalopathy



# The Plan

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- What is your PLAN ?

# Plan

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- CBC,
- Blood Chemistry
- Complete U/A
- Radiograph of the Tympanic Bulla

# Lab Findings

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- PCV – 37 (37-55)
- RBC –  $6.0 \times 10^3$  (5.5 – 8.5)
- WBC-  $16 \times 10^3$  (6-17)
- ALT – 150 u/l ( 10-100)
- Total Bilirubin 1.0 mg/dl (0.0 – 0.9)
- T4 – 21 (20-45 mmol/L)
- U/A: USG – 1.030
- Radiograph of the tympanic bulla is normal

# What test/procedure would you use to rule out Otitis Media/Interna

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- Test/Procedure to Rule Out Otitis Media/Interna?

# Test/Procedure to R/O Otitis Media/ Interna

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- Radiographs of the Tympanic Bulla

# Radiograph #1 of the Tympanic Bulla – open mouth view

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# Radiograph #2 of the Tympanic Bulla – open mouth view

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# List your radiographic findings

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What do you see?



# What do you see on the radiograph?

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- Radiograph #1
  - Calcification of external ear cartilage
  - Increased tissue density of the right bulla
- Radiograph #2
  - Opaque shadow in the right bulla
- Note: In our case Tess' radiographs of the bulla were normal

# Rule Out Elimination

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- From the clinical signs, physical examination, and lab findings what rule outs from the next slide are likely and which ones are unlikely?
- Give reasons for you answers

# Rule Out Elimination

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- Otitis Media and interna
- Ototoxic drugs
- Trauma
- Hypothyroid neuropathy
- Geriatric Vestibular Disease
- Brain neoplasia
- Hepatoencephalopathy

# Rule Outs – possible or unlikely?

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- **Otitis Media and interna** – unlikely – tympanic membrane intact, radiographs of bulla normal
- **Ototoxic drugs** – unlikely – no history of drugs
- **Trauma** – unlikely – no history of trauma
- **Hypothyroid neuropathy** – unlikely T4 is normal
- **Geriatric Vestibular Disease** – quite likely
- **Brain neoplasia** – unlikely – usually slow progressive onset with proprioceptor deficits.
- **Hepatoencephalopathy** – ALT relatively Normal

# What is the Diagnosis?

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- What is the diagnosis?

# Diagnosis

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- Canine Geriatric Vestibular Disease

# Treatment Plan

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- What is your treatment plan?

# Treatment Plan

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- Most times do nothing. They will recover in 10-14 days.
- If vomiting and nausea – give Diphenhydramine (antihistamine)
- If there is any concern about Otitis Media/Interna give antibiotics.



# Prognosis

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- What is the prognosis of Geriatric Vestibular Disease ?

# Prognosis?

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- Excellent – most dogs return to normal in
- 2-3 weeks



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The End





































































