

Hooks, points, oh my!

# Modern Equine Dentistry

Dr. Vicky Johnson



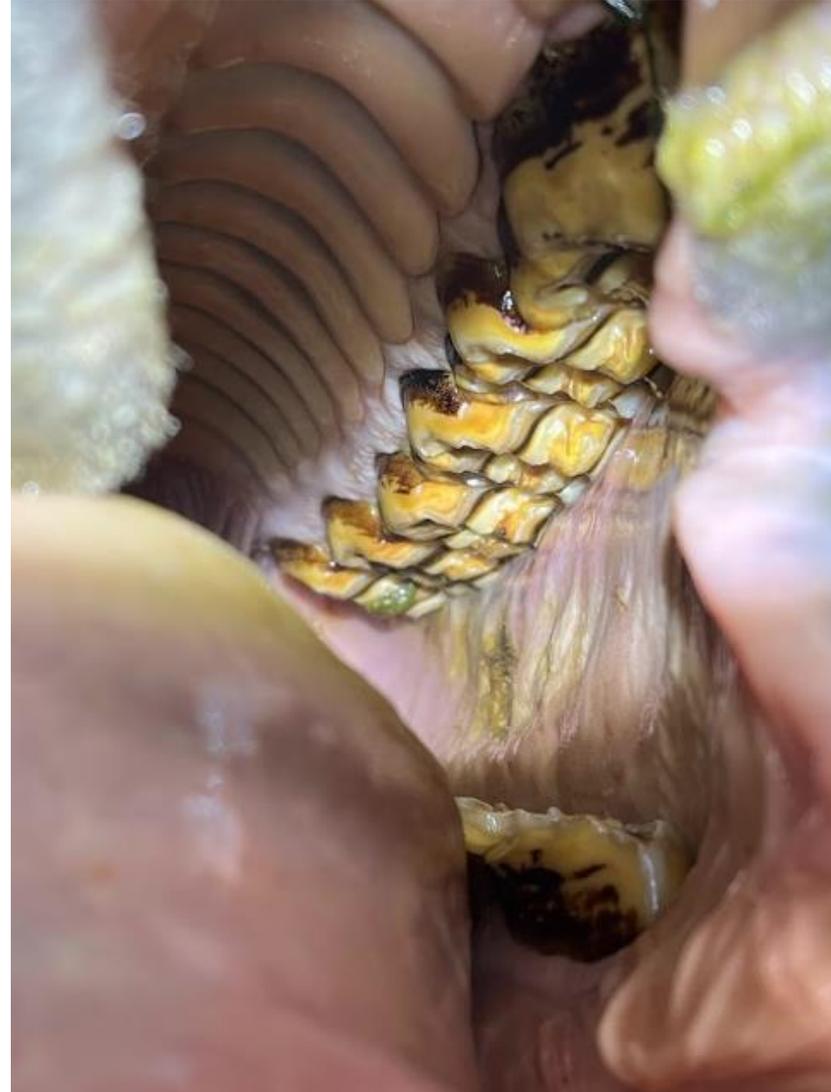
# Today's Topics

- Anatomy lesson
- The oral exam
- The 'float'
- Common dental issues/pathology
- Common myths in dentistry



# A Mouth Unlike Yours or Mine

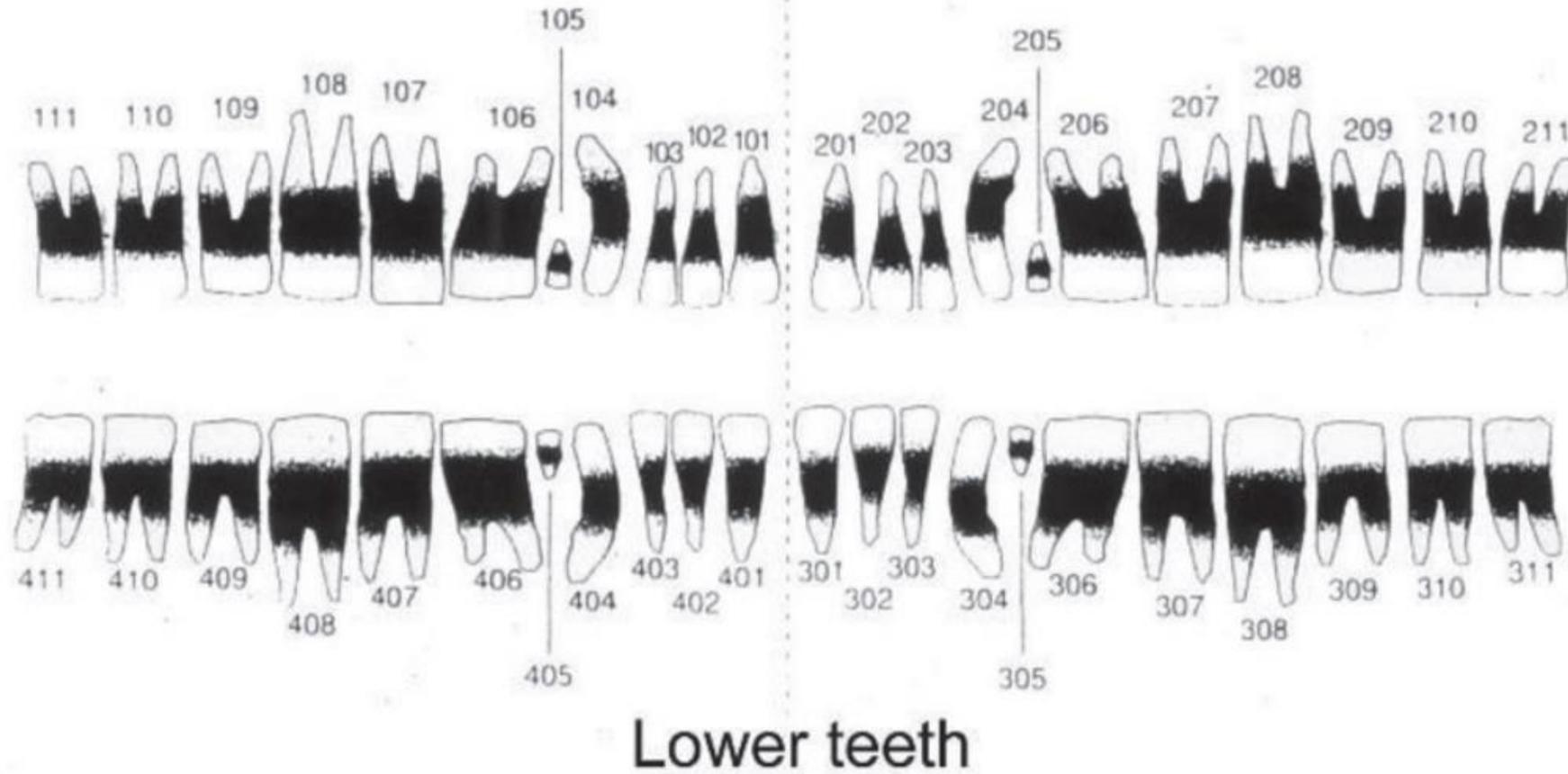
- Horse's teeth are unlike many other mammal's, but similar to other grazing herbivores
- Their teeth are 4-5" long when at their full adult length
- Not all adult cheek teeth are present until 4 years old
- As horses grind their food, they slowly grind away some of the surface of the tooth, which is 'replaced' as more tooth is erupted
- This means the older a horse is, the 'shorter' the crown of their tooth is



Right

Upper teeth

Left



Dixon 1997

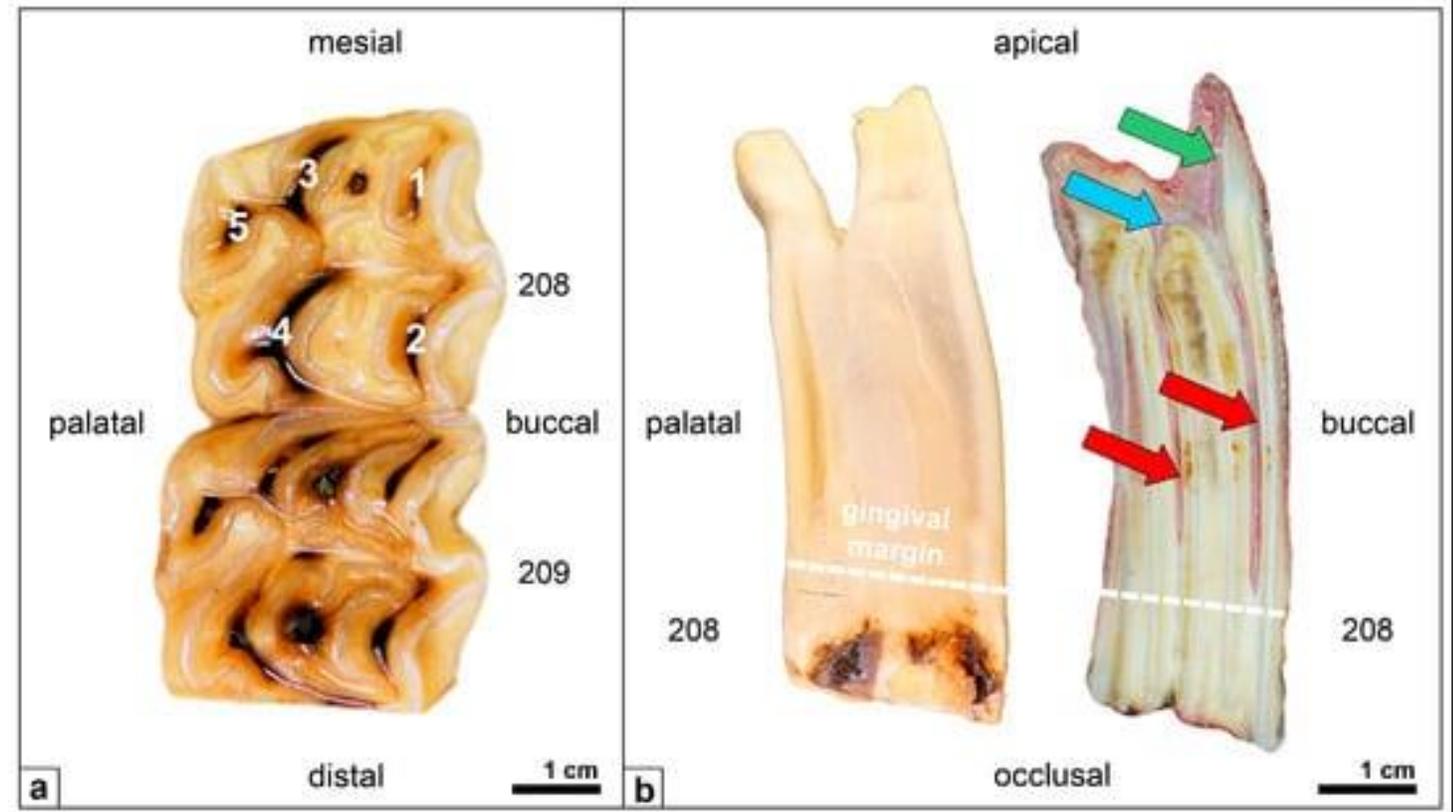
Let's speak the same language...

# Dental terms

- The mouth is divided into 4 quadrants called 'arcades' and are numbered – Upper R 100s, Upper L 200s, Lower L 300s, Lower R 400s
- Start assigning numbers with the tooth closest to 'midline'
- Incisors (3 per arcade) are teeth # 01-03
- Canines (if present – 1 per arcade) - tooth # 04
- First premolar "wolf tooth" (if present – 1 per arcade) - tooth # 05
- Second, Third, Fourth Premolars – teeth # 06-08
- First, Second, Third Molars – teeth # 09-11
- Second premolar – third molar collectively called the 'cheek teeth'

# General tooth anatomy

- Equine teeth are formed by layers of different dental tissue
- This creates the complex anatomy of the tooth and allows for grinding
- Arguably the most **IMPORTANT** part of dentistry to understand why we float, what we float, and how we float





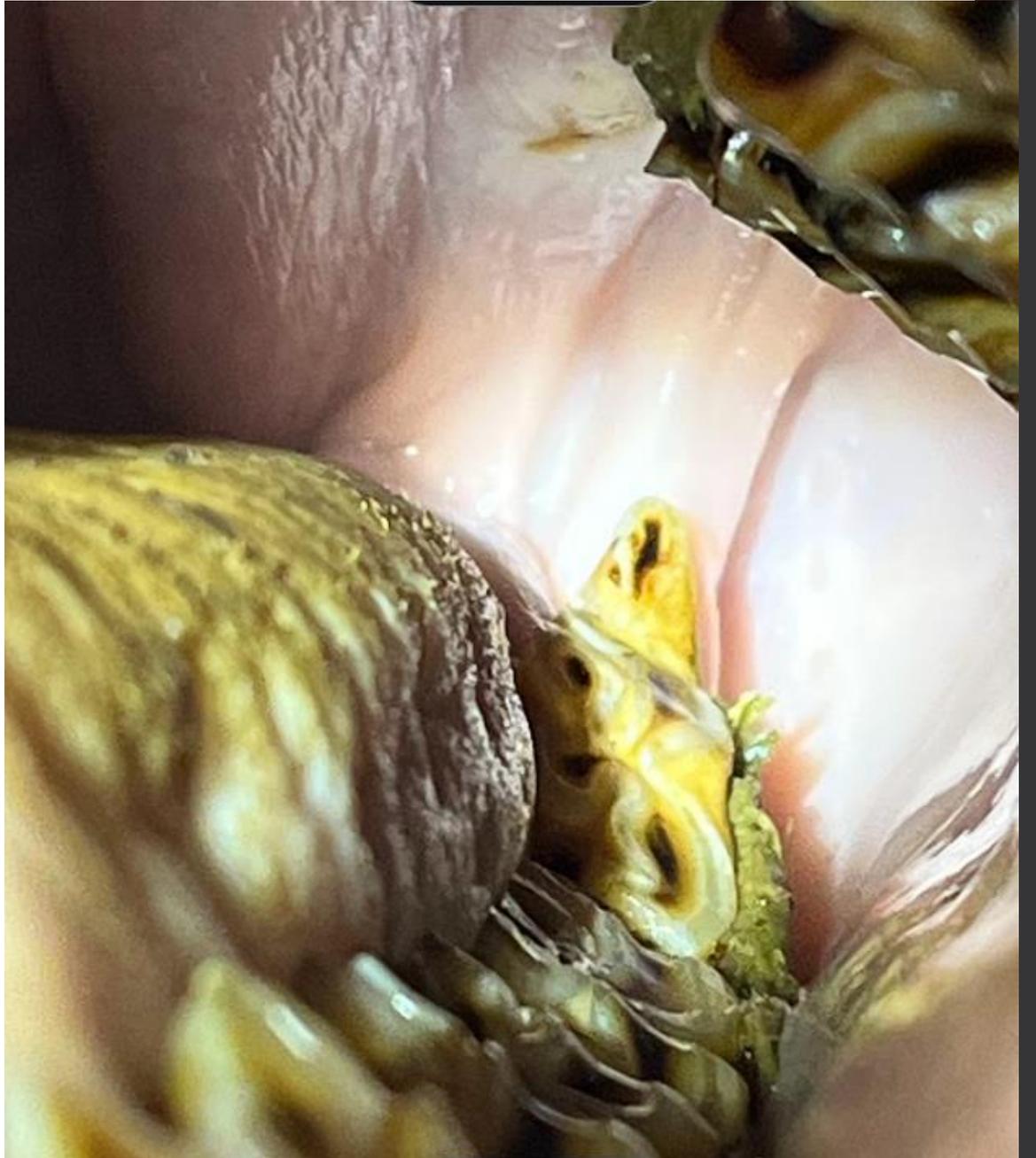
# The oral exam = more than just teeth

- When performing an oral exam – we look at the entire oral cavity including:
  - Teeth
  - Tongue
  - Palate
  - Gums
  - Lips
  - Cheeks
- Most important = the mirror exam







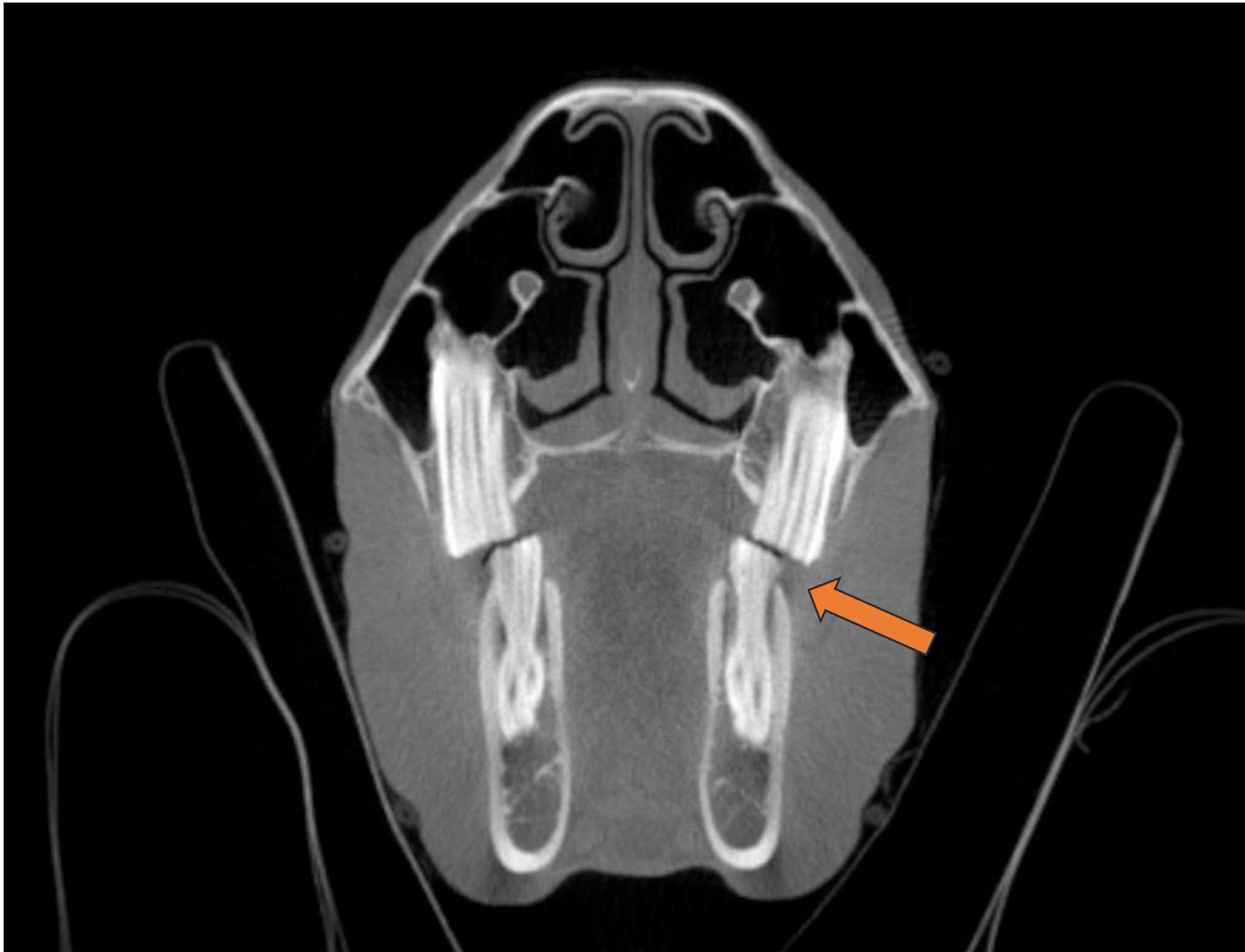


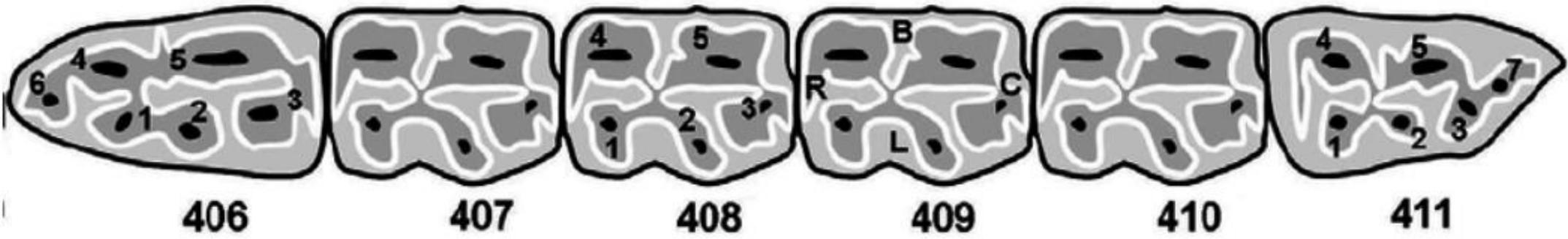
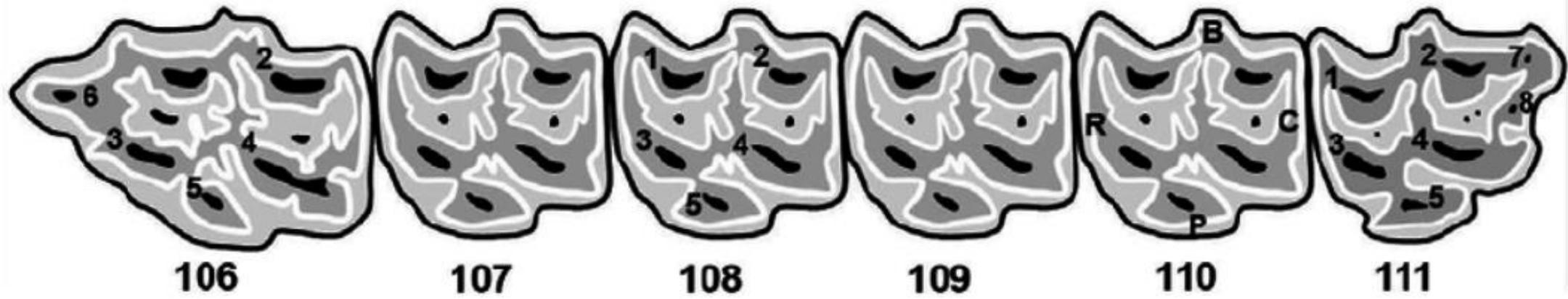


# Odontoplasty aka The 'Float'

- A masonry term to smooth a surface
- We use it to describe the act of using files to remove sharp enamel points, excess ridges and overgrowths
- Targeted treatment to only certain tissues in the mouth
- Use of power floats, hand floats, small hand pieces
- The average horse needs a sedated oral exam and float every 12 months. Horses with pathology may need floated sooner, some middle aged horses with good dental anatomy may only need done every 18-24 months.







# Small points, big problems

- Points can lead to ulcerations in the cheek, tongue or other surrounding tissue that can be painful
- Points that make the horse chew differently to avoid pain can cause excess forces to be put on other teeth
- Horses chewing to avoid contact with points can also lead to or exacerbate the formation of diastemata, or gaps between the teeth that affect the horse's periodontal health



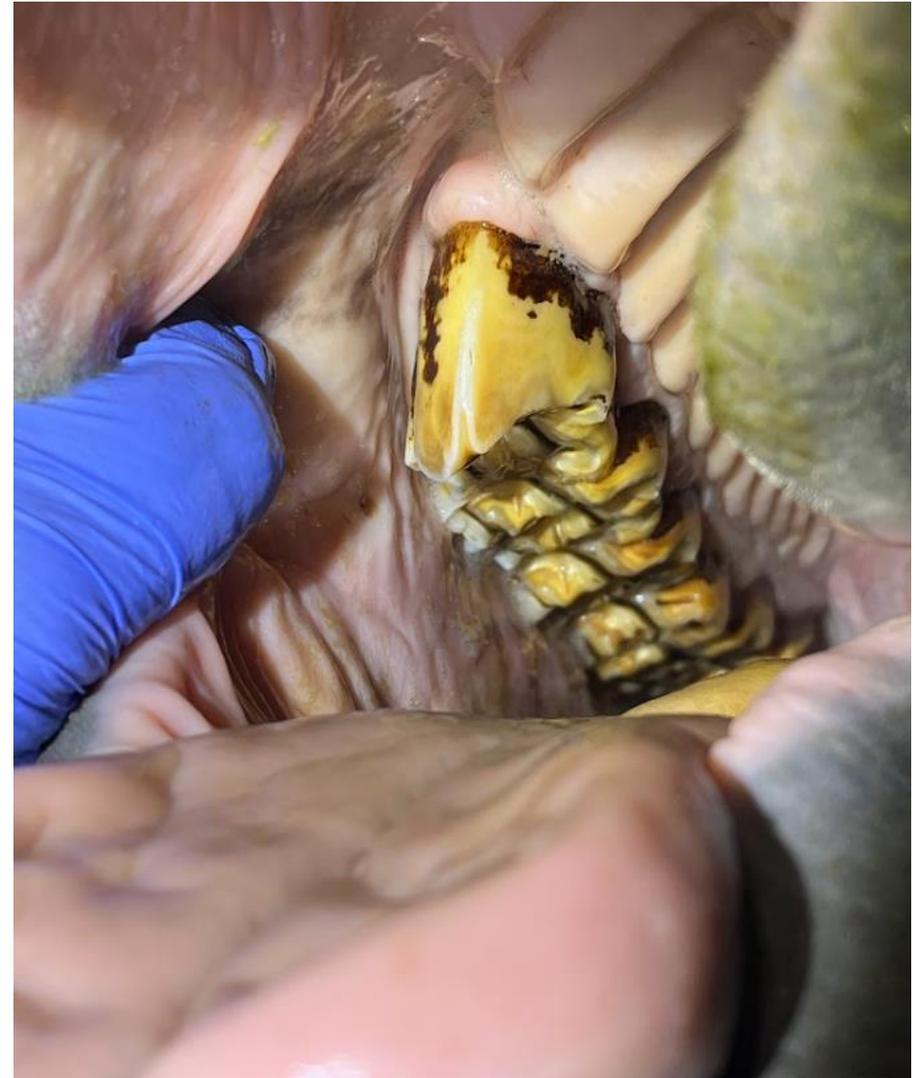
# Other common pathologies

- We categorize problems into either dental or periodontal diseases/conditions to best describe their appearance and location
- Not all issues require immediate attention, some do. Not all require treatment (even long term), but some do.
- It is important to consider the entire mouth when assessing dental and periodontal disease, as they can often be related or secondary to another problem

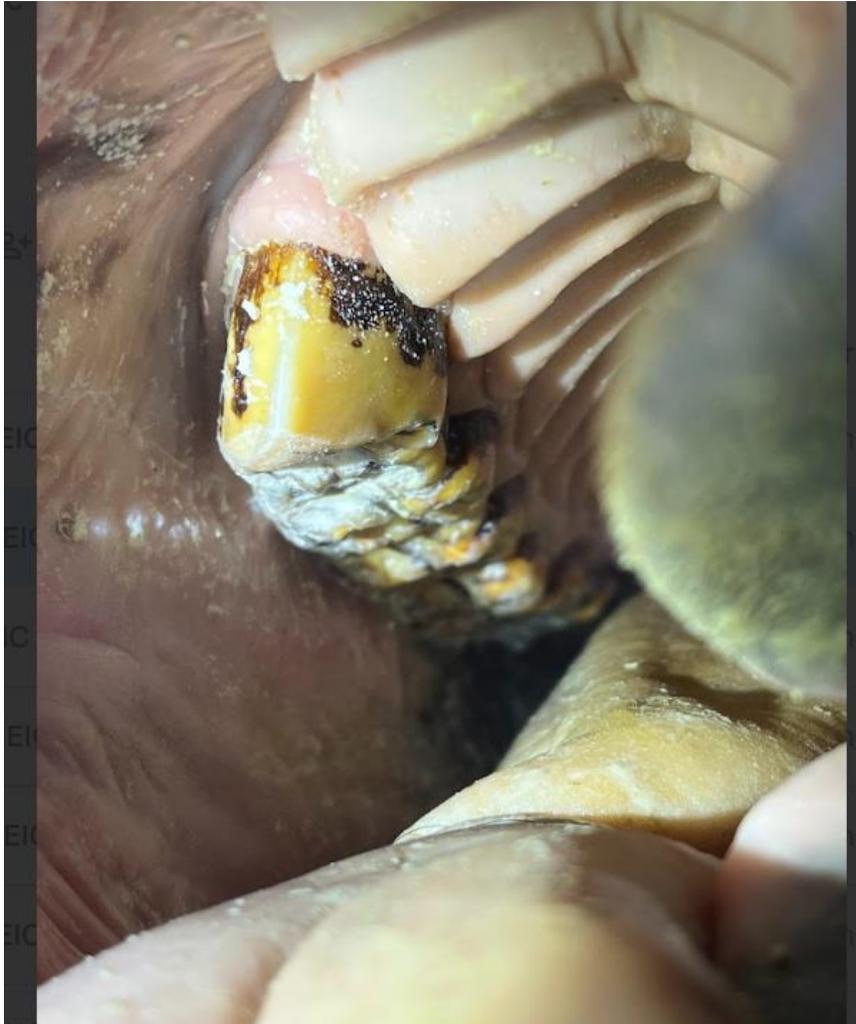


# Most common: Malocclusions - overgrowth/overwear

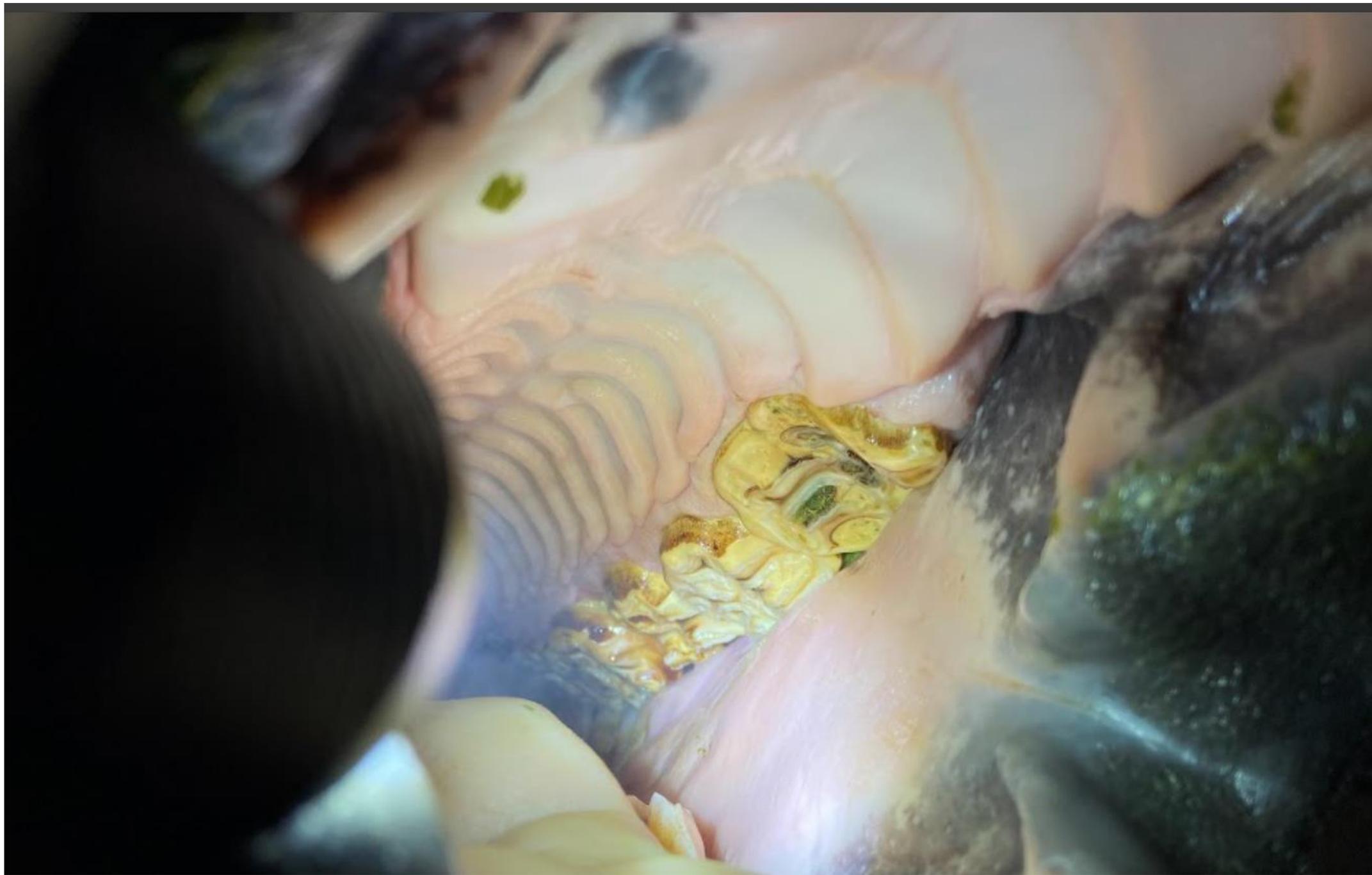
- Overgrowths and overwear are most commonly caused by conformation of the horse's skull/mouth
- Can also occur due to:
  - Lost teeth (due to age or other)
  - Fractured teeth
  - Change in chewing pattern
  - Breed (minis and donkeys)

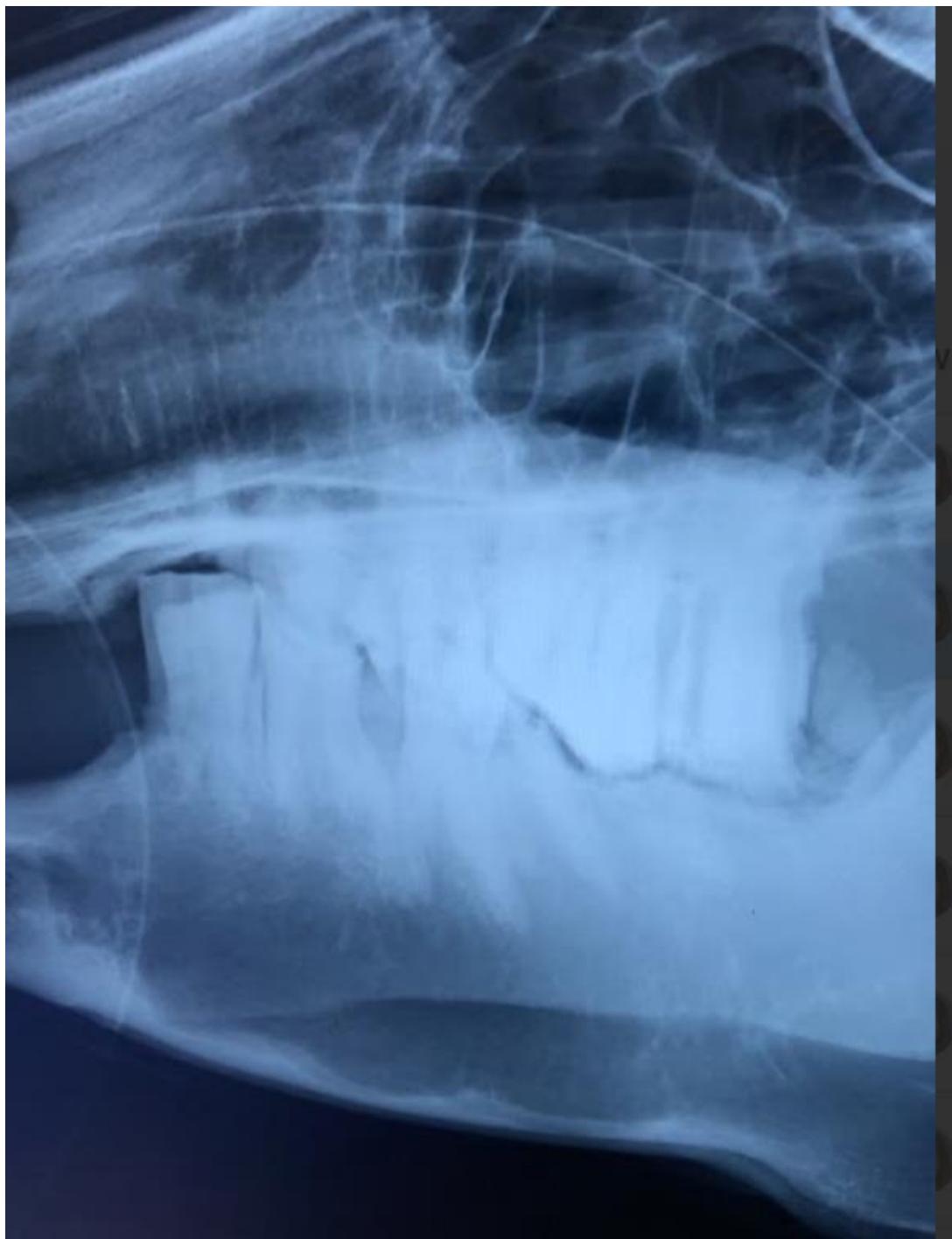


# Correction takes time and training



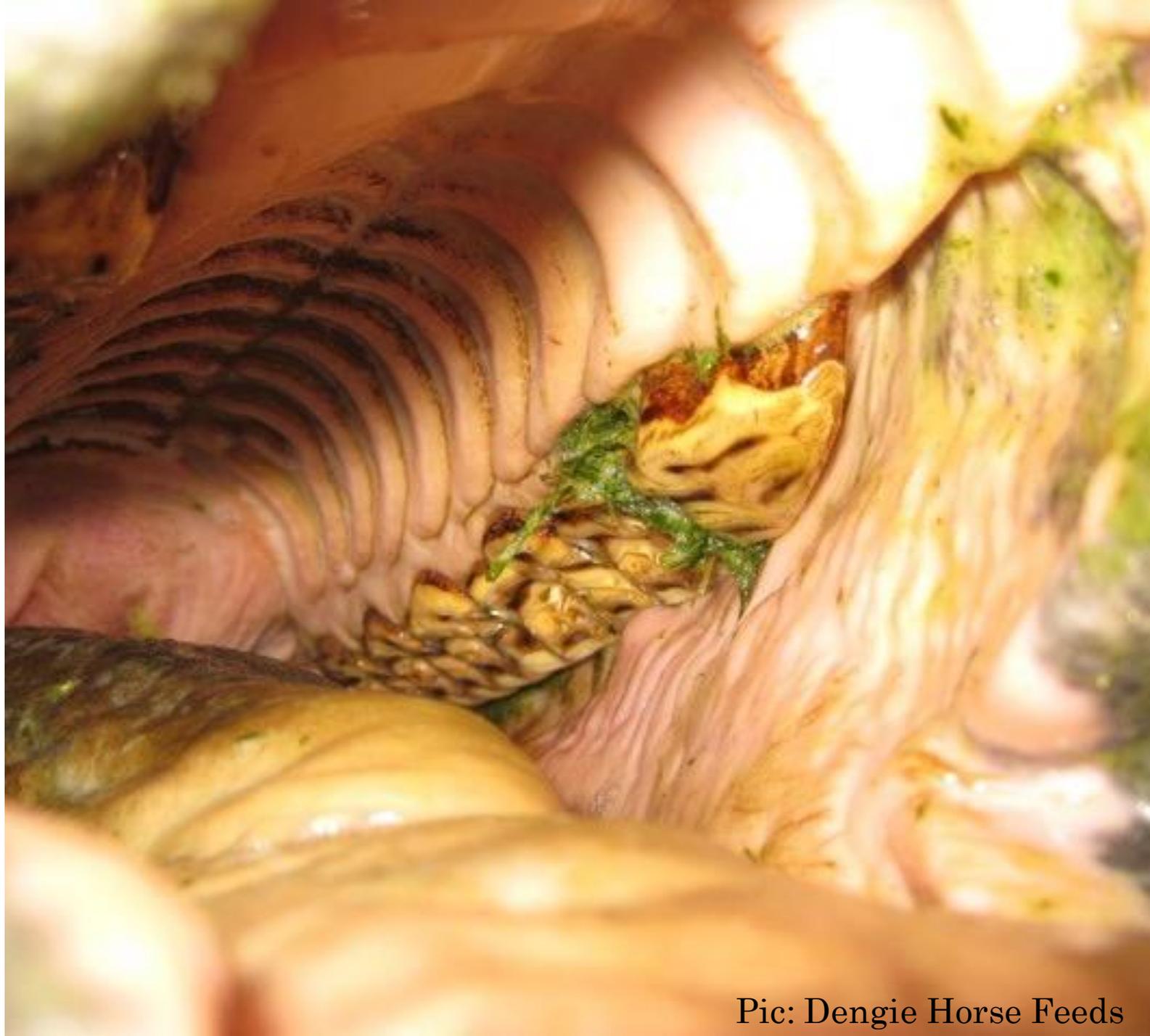
- Reducing overgrowths needs to be done tactfully and carefully (think back to anatomy lesson regarding the location of the pulp horns)
- Correcting these overgrowths can help the horse maintain a more normal mouth over time, not to mention the horses are more comfortable and able to chew appropriately





# Diastemata

- Diastema (singular) / diastemata (plural)
- Gaps between the teeth that occur due to drifting, feed packing, change in chewing pattern, pain (enamel points)
- Can be open (like a channel) or valve (top of diastema is pinched off)
- Often have significant feed packing
- Treatment varies



# Fractures

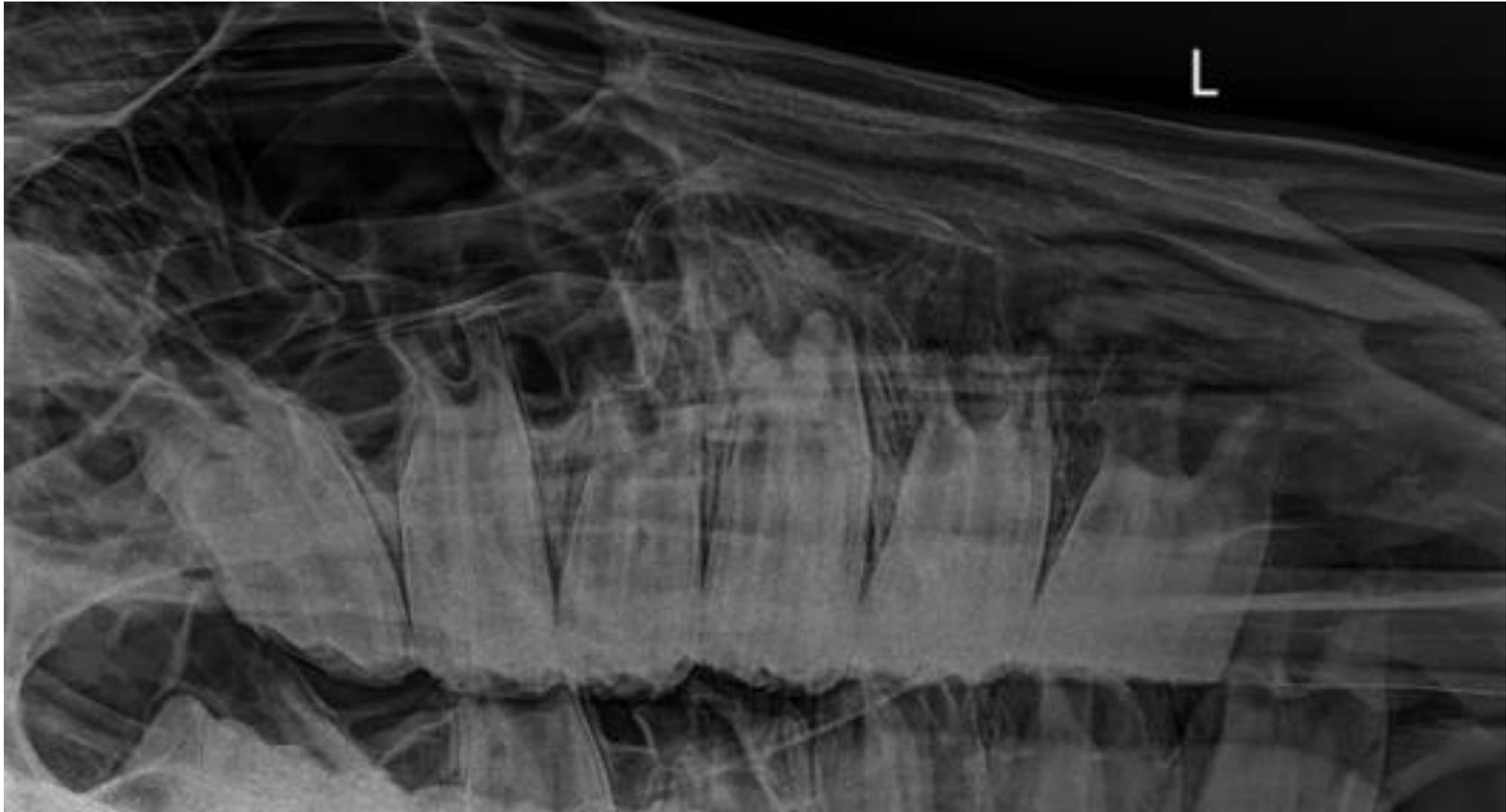
- Can occur in a variety of ways on a single tooth
- Fractures that involve the sensitive structures of the tooth are (almost always) candidates for extraction
- Fractures where teeth are mobile, infected, or have other co-morbidities may require extraction



# Tooth Root Abscesses

- Often come from fractures through pulp horns (either large or fissure) that allow bacteria into pulp canal and travel up to root to set up camp
- Can and will cause a sinus infection if certain teeth develop infections
- Long term antibiotics usually not helpful due to heartiness of bacteria and poor penetration of medication



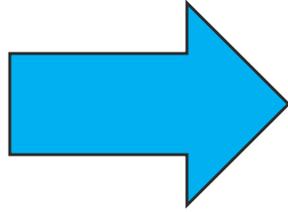




# EOTRH

- Stands for "Equine Odontoclastic Tooth Resorption and Hypercementosis"
- Acts like an autoimmune disorder where the body begins attacking the roots of the teeth – almost always affects the incisors but can affect the canines and second premolars (even the rest of the cheek teeth but less commonly).
- No way to stop or prevent this disease
- Treatment is the removal of all affected teeth
- Recommendations vary on number of teeth to remove





A close-up photograph of a horse's lower teeth, showing significant dental wear and disease. The teeth are yellowed and stained, with visible decay and plaque. The gums are inflamed and swollen, particularly around the central incisors. The text "A few common 'myths'..." is overlaid in white serif font on the left side of the image.

A few common  
'myths'...

# #1: Power tools harm the horse

- Any tool in the hands of someone inexperienced, or if it's not being used appropriately can cause damage
  - Think about the great bit debate in your riding discipline!
  - Training, understanding, and quality control
- Comfort may depend on experience
- Power tools, when used correctly, are safe, specific and efficient tools to perform dentals



## #2: Minis and Donkeys need less frequent care

- Almost always the exact opposite
- These types of equids are more represented amongst horses with malocclusions, and therefore need routine dentistry to address their oral health
- Just like any horse they should be assessed at least once a year





### #3: My older horse doesn't have any teeth left, so he doesn't need a dental

- Very horse – to – horse dependent, but unless he truly doesn't have any teeth left, we still like to assess these guys once a year
- They can get horrible diastemata packing with rotting feed, huge overgrowths, and loose teeth that expire when falling out that all need addressed
- Screening for older horses that may start to be losing 'normal' dentition – this helps us guide you in modifying their diet to help with weight and avoiding choke



# #4: Vets don't like dentistry



**I don't like  
it, I love  
dentistry!**

dentistry!



Thank  
you for  
joining!

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Dr. Vicky Johnson; 2024