

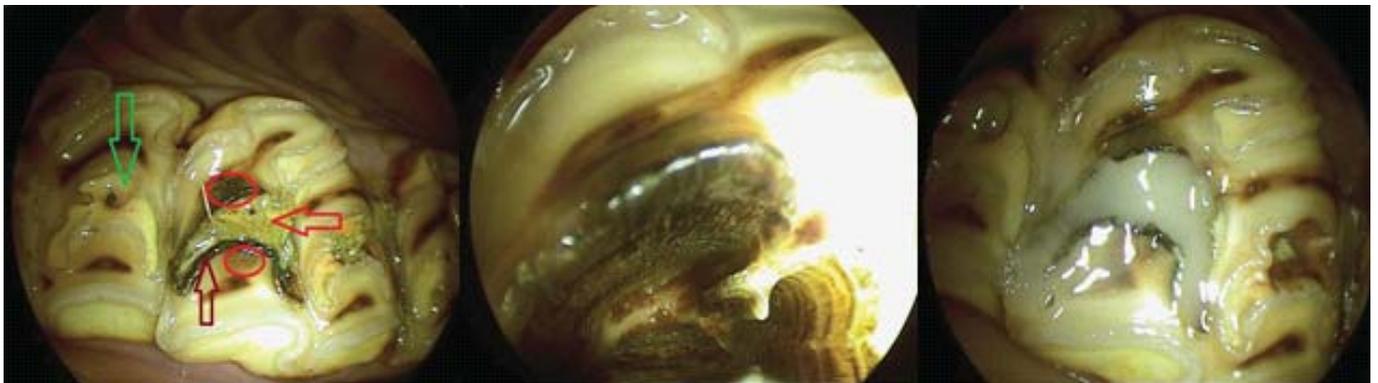
Infundibular Caries

What is infundibular caries?

Infundibular caries is decay in the middle of the upper cheek teeth within a structure called the infundibulum in the middle of the tooth. Each upper cheek tooth contains two infundibulum, which are normally filled from top to bottom with infundibular cementum.

Why does it happen?

If during development, the tooth fails to completely fill with cementum, it leaves the infundibulum with a hollow gap. This means that food is able to pack into the gap, causing it to ferment and attract bacteria, which proliferate and produce destructive enzymes and acidic by-products that destroy the cementum, then enamel lining the infundibulum, and can progress to the dentin and pulp cavities- the vital part of the tooth. It can happen in any age of horse, and in horses of any breed or gender, though more commonly occurs in horses aged in their mid to late teens.



Above: Images taken via oral endoscopy showing infundibular caries (red arrows) spreading into the dentine overlying the pulps (red circles) in comparison to a normal infundibulum (green arrow). The second image shows the infundibulum after cleaning, showing how deep the infection goes into the tooth architecture. The third image shows the infundibulum after restoration (filling.)

How do we diagnose infundibular caries?

Infundibular caries is diagnosed by visual examination of decay of the infundibulum of the horse's teeth by your veterinarian. The severity is graded depending on the degree and distribution of decay, and ranges from 1 (minor decay of the infundibular cementum) to 5 (severe decay resulting in a tooth root abscess from the infection spreading to the pulp, the tooth fracturing in half between the two infundibula, or tooth loss.)

What treatment options are there for infundibular caries?

Treatment for infundibular caries is dependent on the severity. Infundibular caries can be monitored without need for treatment up to Grade 3 in most cases, at which point it is recommended that the food material packing into the infundibulum is flushed out thoroughly, the infundibulum cleaned and disinfected, and repaired via "fillings" (like human teeth), to fill the hole and prevent the feed from packing in there. This will hopefully prevent the weakness leading to the tooth fracturing, and the horse can keep their tooth for the rest of its life!

References:

Borkent, D. and Dixon, P. (2015). Equine peripheral and infundibular dental caries: A review and proposals for their investigation. *Equine Veterinary Education*, 29(11), pp.621-628.