



Equine Dentistry: Straight from the Horse's Mouth

Unlike humans, cats and dogs, horses have very long reserve crowns (the portion of the tooth under the gum) which continue to erupt slowly throughout their life until they wear out at approximately 30-40 years (Fig. 1).

The rate of eruption is approximately 2-3mm a year and is balanced by the grinding away of the dental surface by abrasive plant materials and silicates in their diet. If dental wear and eruption rates are unequal, teeth will develop overgrowths which can cause painful ulcers in the horse's mouth. In the wild, horses would normally graze for 16-18 hours a day. Stabling the horse for long periods of time and feeding concentrates (which require far less chewing) vastly decrease the amount of wear to the horse's teeth and can predispose to overgrowths forming.

Equine *maxillary* (upper) cheek teeth are also set wider than the *mandibular* (lower) cheek teeth, such that their *occlusal* (chewing) surfaces meet at a 10-15° angle. The horse has a one-sided circular motion when chewing food so that the food is ground as the mandibular cheek teeth move inwards over the surface of the opposing maxillary cheek teeth. Reduced hours of chewing leads to reduced wear at the far edges of the teeth allowing overgrowths (*enamel points*) to develop on the outer aspect of the upper cheek teeth and the inner edge of the lower cheek teeth (Fig. 2). These can cause ulceration of the cheeks and tongue respectively.

Common dental problems are sharp enamel overgrowths as shown in (Fig. 3), displaced teeth, 'steps' (overgrown teeth, Fig. 4), 'hooks' (overgrowths on the first upper cheek teeth and last lower cheek teeth, Fig. 4), gaps between teeth (*diastema*), periodontal disease, caries and fractured teeth. Signs you may notice if your horse has a dental problem are: dropping partially chewed food (*quidding*), weight loss, hamster-like food pouching in the cheeks, long (more than 2mm) faecal fibre length, biting problems, head shaking, hanging to one side when ridden, smelly nasal discharge and facial swelling. However, many horses have sharp enamel overgrowths and oral ulceration without showing any obvious signs of pain and so, even if your horse has none of the above signs, dental abnormalities may still be present.

The dental examination should always be performed using a full mouth speculum (gag) (Fig. 5). Some horses may need sedating to place a gag, particularly for the first time. It is impossible to examine or feel the back of the horse's mouth safely without one of these gags and so it is an absolute prerequisite for a thorough dental examination.

Many different kinds of motorised and manual rasps are now available, including tungsten carbide chip, solid tungsten carbide and motorised grinding units. To perform a proper float, a good selection of rasps of different sizes and angles should be available (Fig. 6). Motorised equipment (Fig. 7) is useful for removing large dental overgrowths and is much safer than the dental shears used previously. The Dick Vet

Equine Practice has three different motorised dental instruments, including one of only 2 Flexi-float Ultra systems in the UK which is a water cooled tool to minimise heating of the tooth during longer procedures.

Bit seats are increasingly being performed on ridden horses. This is the practice of rounding off the front part of the 1st upper and lower cheek teeth to make it more comfortable to accept the bit. Although there have been no scientific studies proving this procedure to be necessary, anecdotal evidence suggests that it may be beneficial.

It is recommended that horses should have their teeth examined once a year. If there are major abnormalities such as displaced, fractured or absent teeth, horses will require more frequent dental attention (usually twice yearly).

If you would like to book a dental examination for your horse, please phone the practice on 0131 445 4468.

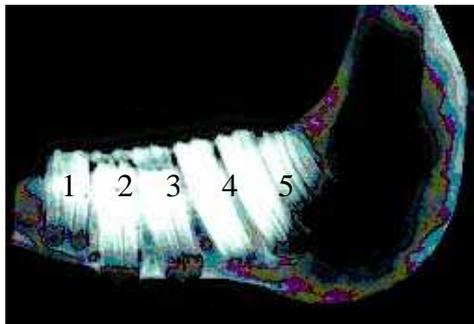


Fig. 1: Xray of the lower jaw of a 3½ year old horse showing the very long reserve crowns of its adult cheek teeth (numbered 1-6). Baby teeth are still present on top of cheek teeth 2 and 3 – these will soon be shed. Cheek tooth 6 is just erupting.

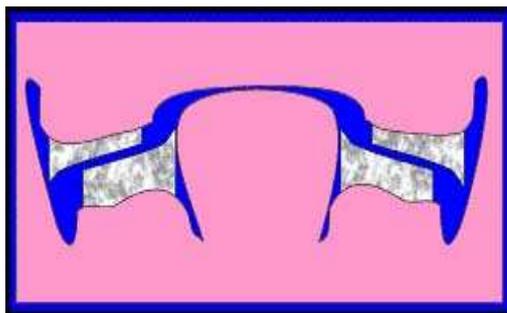


Fig. 2: The maxillary cheek teeth are set wider than their mandibular counterparts. Development of overgrowths (enamel points) occurs on the outer edge of the upper cheek teeth and inner edge of lower cheek teeth.

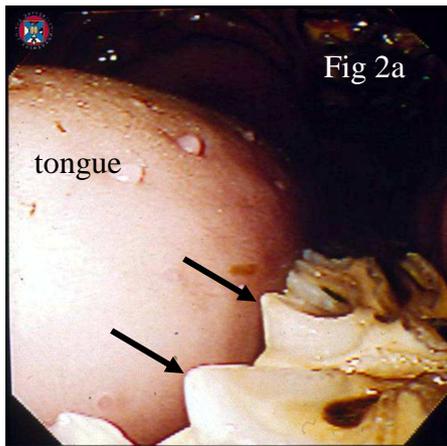


Fig. 3 (a) *Sharp enamel points on the inner edge of the lower cheek teeth (black arrows) and (b) the same horse following rasping of the teeth.*

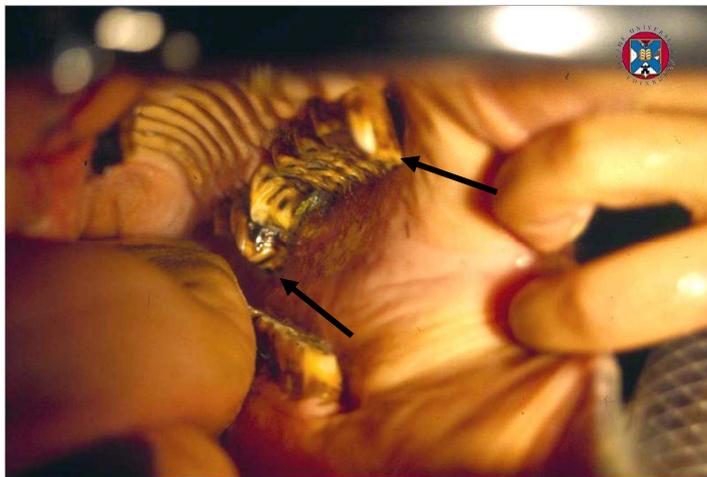


Fig 4: *Overgrown 1st and 5th teeth (black arrows) of the upper left cheek teeth row*



Fig. 5: Horse wearing full mouth speculum (gag) over a headcollar.



Fig. 6: A selection of angled and lengths of rasps should be used to reach all areas of the horse's mouth.



Fig. 7: Motorised 'Powerfloat' dental instrument.