HE equine mouth is a crucial part of the body as problems may lead to inappetence and decreased food intake or difficulties with temperament and steering. Often these problems are a product of our domestication of horses as their modern diet is now a far cry from what evolution designed their teeth and mouth to cope with. The horse’s mouth is adapted for prolonged periods of grazing grass, which is high in cellulose and abrasive silicates, with six large cheek teeth on both sides of the upper and lower jaws acting as a single grinding unit. These cheek teeth are constantly erupting and are composed of three different materials: enamel, dentine and cementum that differ in their strength and rate of wear, which produces an irregular surface perfect for breaking down fibrous forage. The movement of a horse’s jaw has also developed for continual grazing with the temperomandibular joint allowing decreased rostrocaudal (forward and backwards) movement and increased lateral (side to side) movement along with well-developed musculature which aids the constant grinding. But with the modern racinghorse stabled for the majority of its day and feeding on a concentrate-rich diet, they now spend little time grazing, which can lead to dental overgrowths due to inappropriate wear. The upper (maxillary) arcades of teeth are broader and set wider apart than the lower (mandibular) arcades, and therefore the most common sites for overgrowth to occur are the outer edges of the upper teeth or inside edges of the lower teeth.

This lack of wear can lead to sharp enamel points developing which may impinge on the adjacent cheeks or tongue, causing ulceration and oral pain. The distribution of sharp edges differs between horses and they may be present on only a few teeth or an entire arcade. Indications of dental problems include ‘quidding’, where horses drop semi-chewed food from their mouth. This is a sign of soft tissue oral pain which may be caused by cheek lacerations due to sharp teeth. They may also eat slowly, have increased salivation or chew on one side of the mouth. Teeth problems may also alter behaviour leading to an abnormal head carriage or a horse hanging or becoming head shy. If an issue is left unresolved for a length of time, systemic health problems may eventually develop such as weight loss or general unthriftiness.

Routine rasping is the process of removing these sharp enamel edges using manual or motorised rasps. The horse is restrained, and its mouth held open using a Hausman’s gag, allowing the vet to reach safely into the mouth and identify any sharp points or problems. These are then rasped using a variety of different shaped rasps depending on the tooth’s location within the mouth. The occlusal (grinding) surface is not rasped as this may cause oral pain or affect the ability to chew — it is only the irregular sharp points that are smoothed out.

In recent times, motorised rasp blades have become popular as they speed up the process of rasping teeth and reduce the manual effort required, but great care must be taken while using them as they can remove large amounts of enamel in a short space of time.

Other issues

THE first three cheek teeth in each arcade have deciduous precursors known as ‘caps’ which protect the underlying germinal bud. These caps are shed naturally in chronological order as the underlying permanent tooth erupts from underneath, usually from late in their two-year-old year until four. In some cases, these caps may be retained for a period and can cause inappetence or malocclusion of the grinding surface. Removal of loose caps is readily performed in the unsedated horse, although forced premature extraction is to be avoided as this can damage the underlying permanent tooth. ‘Wolf teeth’ are a small remnant of the first premolar tooth which can be found adjacent to the cheek teeth, but are not present in all individuals. They often don’t erupt but if they do, it is more commonly on the upper maxillary arcade and they can be seen on one or both sides of the mouth and vary in shape or size.

Wolf teeth are located in the region of the mouth where the bit sits, and it is often assumed that there is a link between horses with biting problems (control or steering) and wolf teeth, but this is difficult to prove. They are most likely to cause issues if the wolf tooth is “blind”, that is unerupted just below the mucosa of the gum but painful when bit pressure is applied. Wolf teeth are removed routinely under standing sedation with a burr or wolf tooth instrument, although care must be taken to avoid the palate which sits medially of the tooth.

Each cheek tooth arcade consists of six, closely apposed teeth that act as a single grinding unit. But in some cases, teeth may occasionally erupt out of line or position causing a loss of continuity in the occlusal surface. This may cause ‘diastema’, gaps between adjacent cheek teeth where food then pockets eventually leading to secondary gum disease. This can sometimes be identified by halitosis (smelly breath). These gaps may in turn lead to transverse overgrowth of the cheek tooth in the opposite arcade as it no longer has anything to grind against. The treatment is to widen the diastema in a uniform manner and then allow it to close itself.

One easily identifiable dental disorder is brachygnathism, better known as ‘parrot mouth’ where the upper incisor arcade overshoots the bottom jaw. It is a congenital defect in which heritability plays a role although other factors are probably involved.

Surgical correction is possible at an early stage but very rarely employed and by yearling age it is unalterable and non-progressive. The parrot mouth can vary in severity, but no special management is required and eating and biting is unaffected, it is purely cosmetic. Prognathism or ‘Sow mouth’ where the lower jaw overshoots the upper jaw is very uncommon.

Prophylactic dental investigation is advised to take place every six months to identify any overgrowths or abnormalities and here at Johnston Racing all dental work is inclusive within the daily training rate.