Dental problems of the young horse

While congenital abnormalities such as malocclusion (parrot and sow mouth), cleft palate and wry nose, which severely affect a horse’s ability to graze efficiently, can now be corrected. The key lies in identifying these issues early enough in the foal’s development.

For example treatment and management of parrot mouth (Brachygnathia) should begin at just 12 weeks of age. This is because the mandible and maxilla (top and bottom jaw) are at a stage of development where it is still possible to have a significant effect in reducing the severity of mismatch as the foal grows.

The equine dental veterinarian who is probably at the forefront of treatment for this condition is Dr Jack Easley from Shelbyville Kentucky. Here are a few words by Dr Easley on the subject: “Did You know Parrot Mouth and Wry Nose can be corrected? Orthodontic treatment not unlike that used on young children is utilized to treat parrot mouth (overbite) and wry nose (deviated nose). Both conditions are congenital dental and cranio-facial deformities.”

Parrot Mouth

In the case of parrot mouth, Dr Easley comments: “the reason for correction is to realign the facial bones and teeth so that the foal can grow, develop and have more normal tooth alignment. The parrot mouth condition worsens with no attention as the upper incisor teeth in front of the lower drop down with jaw growth. The cheek teeth develop wear abnormalities and elongations put stress on the facial bones, pushing the lower jaw backwards, exacerbating the severity of the problem (see image 2). Orthodontic correction is a very slow process that involves retarding growth of the upper jaw while stimulating growth of the lower jaw. Correction should be undertaken in foals less than six months of age for optimal benefit. Cosmetic appearance is not the goal, but a functional healthy mouth and mastication apparatus.”

Wry Nose

Wry nose or campylorrhinus lateralis, is where there is a shortening of the bones of the upper jaw on one side of the face. This can lead to very spectacular deformity which makes eating difficult, and if the nasal septum is severely deformed, the foal can also have breathing problems (respiratory difficulty) from mild to severe. Equine dental surgeons have developed techniques to both improve the cosmetic appearance, and help the foals to eat and breathe normally as they grow.

A miniature gelding with a sow mouth malocclusion and impaction of his upper first molars was seen, and even oral examination was difficult due to limited access associated with the small size of the mouth. Intestinal extraction was determined to be the optimal method for removal especially with the close association of the affected molars to the eyes. A normal approach to perform the oral extraction was impossible and a surgical technique under general anaesthesia was proposed. The gelding was anaesthetized and bilateral nerve blocks were given. Oral access was not suitable for instrument placement for the extractions and a bilateral commissurotomy technique was performed which the author had used previously on koalas and wombats successfully.

A full thickness incision was made through all layers (skin, muscles and mucosa) midway between the occlusal surfaces of the cheek teeth to the level of the third cheek teeth (premaxillary). Care was taken to avoid damage to the salivary duct papilla and blood vessels. The procedure was then repeated on the other side.

The increased exposure allowed much improved access to all parts of the oral cavity. The extraction procedure was then performed as for a normal oral extraction. The surgical sites were closed in three layers with absorbable sutures.

Anaesthetic recovery was uneventful and the horse was muzzled to prevent eating for 6 hours. The gelding was eating grass normally the next day. A recheck 2 months post-operatively showed the surgery and extraction sites had healed completely. The use of a bilateral commissurotomy proved invaluable in this case due to the poor oral and dental exposure limited by the very small mouth opening. It would have been almost impossible to fully rectify this animal’s dental issues had full exposure of the dental arcade not been sought. Correct and fully functional dentition is essential to an animal that requires large volumes of finely ground feed and therefore has to satisfy its metabolic requirements. The immediate return to eating and progressive improvement in this horse post procedure indicates that this technique, though visually drastic, had little impact on the animal’s overall health and recovery.

Miniature Horses

Miniature horses are particularly prone to dental issues like “sow mouth” and impaction of teeth. Recently, Dr Gary Wilson from Advanced Animal Dentistry, examined and performed surgery on a young miniature horse (See Case Study above).

We asked Dr Wilson about sow mouth malocclusion and overcrowding in ponies and miniature horses: “The normal occlusion of the horse is defined as complete incisor alignment when the horse’s head is down in the natural grazing position. This means that neither the upper incisors nor the lowerers are in front of the other. This is important as the incisors are the teeth that cut away the pasture as the horse eats which is the principle of grazing (as seen in the main image).

In the horse there are two basic forms of malocclusion, they are commonly called parrot mouth and sow mouth.”

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Sow Mouth

With sow mouth the lower (or mandibular) incisors are on front of the upper (maxillary) incisors (Images 1 and 3). This basically means that the lower jaw is comparatively larger than the upper.

Other names for sow mouth are monkey mouth or more correctly mandibular prognathism.

The clinical effect of this malocclusion is that the incisors can overgrow as they are not wearing away as normal due to the misalignment (Image 4). The cheek teeth of these horses will also be out of alignment, and overgrowths such as rams and hooks frequently occur (Images 1 and 3).

Overcrowding

On their own these malocclusion cause enough issues, but in smaller equines such as ponies and miniature horses overcrowding of teeth also occurs which compounds the problems.

Unfortunately for these smaller horses their teeth are almost the same size as their larger cousins and, basically, they don’t fit in the spaces available (image 4). Overcrowding and displacement of the incisors is usually manageable but overcrowding of the cheek teeth causes major problems especially with impaction of the permanent teeth similar to humans with impacted wisdom teeth.

The treatment for severely impacted teeth is, of course, extraction. This can pose serious complications with these small individuals due to their small size and difficulty in access to the teeth.

Intraoral extraction has long been the most appropriate technique for cheek tooth removal in the horse. This approach results in an intact alveolus (socket) which will heal by granulation and minimal aftercare is required. Repulsion techniques often lead to multiple complications such as persistent discharging fistula, communication between the oral cavity and the maxillary sinuses (sensal fistula which, in some cases, may never resolve), alveolar fracture, sequestration, jaw fracture and damage to adjacent structures.

Small sized animals pose a significant problem with the difficulty of oral access. We have developed a technique which allows good visualization and access.

Dental Trauma

In fact probably the most common dental condition affecting young horses is dental trauma. Horses (esp. the young) are often inquisitive by nature and also large and powerful enough to inflict serious injury on one another and themselves.

The most common form of serious dental trauma involves fracture of tooth roots and or surrounding bone. Often young horses will hold onto something with their teeth (a gate or rug for example) and then move suddenly in excitement or fright forgetting to let go of the gate etc.

This usually results in a “pull back” injury to the front teeth as the teeth and often surrounding bone a peeled back from the rest of the jaw. As you can see in the photo below, this can look quite dramatic, however, should you find yourself around when a horse injures itself in this way, there is no need to panic, just stay calm and call your equine dental vet.

Fractures can often be repaired and your dental vet will be able to prevent infection (the biggest enemy of a successful outcome) and provide your horse with effective pain relief.

Horse with serious fractures such as the ones shown in this article will often show little or no outward sign of a problem, for example the X-ray of a horse’s jaw showing a complete fracture. Most horses like this will still eat and may have little or no swelling around the fracture site.

Of course the dental care of young horses is as complex as the dental care of any horse, and they require sharp enamel points to be removed from their cheek teeth regularly. Deciduous teeth to be extracted, they suffer periodontal disease (in some cases so severe they cannot eat) and so on.

For more information on congenital dental defects and dental care of the young, the best is the website www.equinedentalvets.com.au or talk to your local Equine Dental Veterinarian.

Discover more at www.aebc.com.au or phone (03) 5787 1374