Equine Dentistry–The Benefits of Proper Care

By ROBIN STANBACK

Signs of equine dental problems are as varied as are the horses that present them. From the obvious, handfuls of feed dropping from the mouth as the horse eats and grain passing directly through the animal, to the subtler head tilting and weight loss, the solutions involve knowledge, proper equipment, and fortitude. For all the unique problems dental care can present, there is not a specific course or a specialized school that provides a degree in Equine Dentistry anywhere in the world.

Dr. Jack Easley, from Shelbyville, Kentucky, has spent years honing the skills that have placed him in high demand as a veterinarian who is well known for his ability to "fix" a horse's mouth. He explained, "There is no AVMA board specialty in equine dentistry or schools that specialize in teaching equine dentistry. What you have are people, many of them lay people without a veterinary degree who have learned how to care for a horse's mouth from watching other people and learning what they can from experience. This may be changing thanks to new technologies and a heightened appreciation for the importance of the mouth in the overall well-being of the animal."

Dr. Easley achieved his veterinary degree from the Tuskegee University School of Veterinary Medicine, did an internship at Oklahoma State, and did his surgical residence at Kansas State. When he settled in Simpsonville, Kentucky he had a number of cases referred to him for surgery that involved problems in the mouth. The result of his success with these cases was an influx of even more dental referrals and a prodding from local laymen and veterinarians to become more involved in equine dental care.

"I believe we are seeing more interest in equine dentistry now than we have since the end of the First World War," Dr Easley explained. "The majority of old textbooks focussed on the feet and the mouth. The old cavalry veterinarians concentrated on these areas as the two most important for the working horse. The focus on the mouth took a back seat to the technological advances in other areas of equine veterinary care and, as the old cavalry veterinarians retired, there were fewer people who concentrated on this aspect of equine care. Look at all the inroads that have been made in colic research or reproductive science as an example. Veterinarians began to focus on these areas and less time and attention was paid to the mouth."

While the technical revolution has brought along ultrasound machines, arthroscopic devices, and the ability to perform successful colic surgery, it has all but bypassed the equine mouth until recently. Dr. Easley reported, "There have been two fairly recent advances that have dramatically changed our techniques in the last five years, power tools and better sedatives. There are now devices that can be used to float teeth that offer significant improvement over the basic tools that have been used since the turn of the century. There is a battery powered oscillating float and a cable driven drill that has burrs made for the end that can do in minutes what it used to take hours to do. Some of the older standard instruments like the molar cutters that were used to fracture teeth across the crown could be dangerous in that the tooth might not always break transversely where it was intended to break."

Dr. Easley examining the oral cavity of a horse with the aid of a full mouth speculum and head light.

The speculum that has been a standard tool for equine dental care has also seen an update, from a heavy cumbersome device to a much lighter and easier to use tool. Without the use of sedatives to help control the horse, using the older speculums could prove to be dangerous. This leads to the second recent advance in dental care. According to Dr. Easley, "The advent of new medications for sedating horses during dental procedures has made a great difference in the accuracy of diagnosing problems and the dental care required to correct

them. Dormosedan, Xylazine, and Torbugesic enable the veterinarian to safely examine and treat problems in the equine mouth that might have been considerably more difficult to treat in the past. The equine mouth is a dark and dangerous place. With these medications it is safer and the veterinarian can do a much more thorough job. The medications legally can only be administered by a veterinarian which complicates the procedure for laymen. To do a thorough job, you really must sedate most horses. A fractious horse without sedation would be impossible to do."

New tools and more reliable sedatives have brought about a reemergence of a focus on the equine mouth for general care and for the diagnosis of health problems. Another factor in this trend, according to Dr. Easley, is that horse owners are becoming more sophisticated, reading more, keeping horses in active competition longer and asking more of their younger horses. These things combined have brought about a renewed interest in the changes that occur in a horse's mouth and what a veterinarian can do to help the young athlete, the breeding animal and the aged companion.

Dr. Easley said of the juvenile, "A lot more is expected of younger horses today and there is so much going on in the juvenile mouth. A horse doesn't develop his full mouth until the age of five and we are seeing horses now that are most productive between the ages of three and five. It is very important to do a complete oral exam so that any problems that can affect their performance can be corrected if possible as early as possible. We don't select horses for good dental conformation. In the wild, horses cull themselves out. We don't breed for good dentition. Instead we are refining head types that are aesthetically pleasing to us or breeding horses for athletic ability without dental conformation being a concern. Many of the problems these breeding combinations present can be corrected or worked with at an early age."

Dr. Easley pointed to Warmblood crosses and the National Show Horse, a cross between the American Saddlebred and the Arabian, as examples of head styles that can create dental challenges. Within individual breeds there are specific head types that, when mixed with a different style of facial structure, can cause problems. He explained, "Each specific breed has attributes that present challenges unique to that breed. Dental problems seen in a Saddlebred are different than those presented by an Arab, a Thoroughbred, or a draft horse. Breeders have imported European Thoroughbreds who are real distance horses, longer and rangier than say a Northern Dancer-bred horse which has a boxier head. When these two types are bred together it becomes essential to provide their offspring with proper dental care because their upper and lower jaws may very well not have proper occlusion. We see some of these horses come up with parrot mouths. Problems can occur in the Warmbloods where we see a lot of malocclusions in the cheek teeth. Many of these horses have problems with hooks. When you take the longer facial structure of a Saddlebred and mix it with the shorter and extremely refined Arabian face, you are inviting malocclusion."

As horses age their dental problems shift from basic conformation to a combination of conformation and work-related needs. The middle-aged

Dental Care Tips

■ Behavioral changes that signify potential dental problems include:

Abnormal head carriage	Tongue rolling
Head tossing	Refusal to accept the bit
Bit chewing	Dropping feed while eating
Slower eating habits	Reluctance to drink cold water
Slobbering	Sour disposition

■ Some common causes of dental problems:

- Uneven wear of the teeth causing sharp edges
- An infected tooth
- A foreign object caught in-between teeth or lodged in the gums
- Hooks that form from malocclusions or lost teeth
- Structural problems like Parrot Mouth or Prognathism

■ Dental exam schedule:

1. Check newborn foals for malocclusions and congenital abnormalities.
2. Re-check teeth every six months for the first three years to correct problems arising from injuries, retained deciduous teeth, extra teeth, and maleruption of permanent teeth.
3. Continue to check teeth every year to monitor and correct any problems.
4. Older horses may require more frequent monitoring as poor dental health has been identified as one of the most common problems of older horses' inability to maintain weight.

horse presents a different set of dental problems that can run the range from untreated malocclusions to abscesses, bitting problems and even infectious diseases. Dr. Easley pointed to an example of a competitive dressage horse to illustrate the effects of incomplete dental care. "A 12-year-old horse has been a very successful competitor in the dressage ranks for years but has become increasingly more difficult to collect. His trainer has examined many of the possible reasons for the problem including having the horse scoped for airway problems and having the horse's teeth floated. Still, every time the rider tries to collect the horse he responds by opening his mouth. What does the trainer do? He resorts to a more severe cavesson in an effort to tie the horse's mouth shut. The end result is the horse tossing his head. A horse when collected, as he must be for the show ring, has to push his bottom jaw forward in order to pull his head up and back. If that individual has hooks at the back of his dental arcade that have been missed by the person floating his teeth, he will not be able to do as his rider requests. The hooks alone are not the problem; it is that they push the entire dental array out of alignment. His jaw will hang on those hooks. It will be physically impossible for him to pull his head back and he will open his mouth to allow the jaw to slide forward. Tie that mouth shut and the horse has no other choice but to toss his head away from a pressure he cannot accommodate."

Head shaking can also be the result of bits pressing against sharp points on a horse's cheek. Describing the pressure a bridle places on the horse's mouth, Dr. Easley said, "A horse is anesonathic which means the upper and lower jaws are different widths, with the lower jaw being about 30% more narrow than the upper jaw. Because there is less contact on the outside of the upper teeth, sharp points can form that can cause problems. These points on a horse's teeth are pushed into the cheek by the bridle. When the rider pulls on the bit, the cheek pieces of the bridle push that sharp point even harder onto the cheek and the horse pulls away from the discomfort. This problem usually begins subtly with the horse showing few symptoms. He may shake his head, he may try to rear or he may simply act confused and less responsive. He develops what his rider may refer to as a 'hard' mouth. Corrective dental care can make a real difference for this horse."

An abscess that has been missed, a cut on the tongue, thistle spikes from hay or straw that have sent splinters into the gums between teeth or even tumors may all be causes of head shaking as well. These are usually problems that appear in the older horse. Dr. Easley said, "Every practice has its share of older horses that are still working either as show horses or family pleasure horses. We are seeing more older horses now than ever before. Part of this is due to the overall advances in veterinary care and some of it is due to the greater attention that is now being paid to the mouth. Horses have the best tooth structure of any domestic herbivore. There is a biological silicate in grass, an abrasive crystal that wears teeth out in all herbivores. Horses have a long hypsodont tooth that is, by design, capable of lasting them well into 30 years of age. As long as the molar table is kept very level and problems like abscesses and tumors are properly tended, the older horse's mouth will hold up well."

Age and use are two factors the veterinarian must take into consideration when asked to evaluate a horse's mouth either for an exam prior to purchase, general examination, or for help in determining what might be causing a horse's behavior or health problems. Dr. Easley recommends looking at the overall health picture, fat, thin, shining or dry hair coat, and attitude. All of these factors can be affected by poor dental health. Then take into consideration the nutritional program for the individual. Is it stalled and fed hays and grains or out all the time on grass? Nutrition and the form of the feed being taken in will affect wear and tear on the teeth. Look for good dental occlusion with normal and even wear of teeth in the back and front and consider the head type when making an assessment.

A rostral upper premolar 2 hook. This hook can easily be seen and felt when the mouth is opened with a speculum. Power dental floats or grinders allow the veterinarian to correct these wear abnormalities with ease.