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Equine Dentistry: Part 1 – The Basics

In the last two decades there has been a revolution in equine dentistry. Twenty years ago, very little effort was made to care for horse's teeth. Basic dental "floating" has been performed for hundreds of years, but techniques and knowledge did not progress much during that time. Until fairly recently, many veterinarians had either little interest in doing dentistry or, if they did, they had poor equipment that did not allow them to do the work properly.

Today equine dentistry is getting lots of attention. There is a huge amount of information - and misinformation - available to horse owners. It is important for horse owners to have basic knowledge about equine dentistry so that they can sort through this maze of material and make good decisions for their horses.

Recent changes in equine dentistry include:

- Improvement in the quality of equine dental equipment. There is now a huge variety of motorized instrumentation available for grinding equine teeth, as well as elaborate mouth speculums and hand instruments. Motorized dental equipment is not necessarily superior to good hand instruments. It simply makes the same job quicker, easier and sometimes more practical to perform.
- With the recent growth in knowledge and technology, dental techniques have been developed that allow more thorough examination and treatment of the horse's mouth. Proper use of high quality and well-designed instruments allows thorough grinding of dental overgrowths on all the teeth. Techniques have even been developed that allow fillings and root canals to be performed on horses.
- In recent years, equine veterinarians have developed much more experience in dentistry and many of us take a special interest in this area of practice.

In my experience, many horse owners are confused between dentistry performed for the health of their horse and dentistry performed to enhance performance at an intended discipline. Professionals, in many cases, have not done an adequate job in explaining this difference. The focus of this article will be on dental maintenance as it relates to the overall health of the horse.

EQUINE TEETH

In order to understand common dental problems and concepts of equine dentistry, it is important to know a little about the structure and function of equine teeth:

- Adult horses have between 38 and 44 teeth depending on gender, and whether or not an individual has wolf teeth.
- There are 6 upper and 6 lower front teeth. These are called the incisors and are mostly used for grasping and nipping feed.
- Canine teeth are present (mostly) in male horses and developed as fighting teeth. They have no chewing function but can become very sharp and occasionally can cause problems.
- Wolf teeth are tiny peg teeth just in front of the rows of cheek teeth. They do not have a known function and are often removed because they are thought to cause discomfort from the bit in some horses. Other horses do not develop wolf teeth.

The important and unique teeth from a health standpoint are the cheek teeth - molars and premolars. Equine cheek teeth have developed over millions of years as an efficient means for grinding coarse grasses. Many horse owners have never even seen their horse's cheek teeth, as they are far back in the mouth.

The special structure of equine cheek teeth is very different from that of human teeth. Horse's teeth do not "grow." The permanent teeth in a young horse are very large, about 3 to 4 inches long, but are buried in the skull, and erupt through the gums throughout life. The equine cheek tooth has a corrugated grinding surface that wears off against the opposing tooth and on feed. This loss of tooth is accounted for over time by the tooth's continual eruption through the gum.

Modern, high grain diets favor the formation of dental overgrowths, as the teeth are not worn as effectively by these less abrasive feeds. In a very old horse, the entire tooth has erupted and worn off, and the tooth ultimately just falls out. Understanding this process of eruption helps explain how horses can develop dental problems, and gives some insight into the nature of those problems and how they are treated. Here are a few examples:

- If a tooth does not meet another, it will continue to erupt but not be worn, resulting in a long tooth which can cause pain or interfere with the grinding movement of the jaw. These teeth need periodic shortening to prevent problems.
- In normal horses, the upper rows of cheek teeth are further apart than the lower rows. As these teeth wear, dental points form on the outer edges of the upper teeth and the inner edges of the lower cheek teeth. These points are normal, but they can become excessively large or sharp, and can cause pain when eating or interfere with normal grinding movement. The treatment required is removal and smoothing of points and overgrowths.

- Equine “baby teeth” (deciduous teeth) erupt from prior to birth through the first months of life. The permanent teeth replace these between 1 and 4 years, with specific times for specific teeth. Dental problems can occur in young horses as these teeth are replaced. Problems like retained caps (baby teeth) can cause pain or interfere with normal grinding movement. Retained caps causing problems require removal.

Any of the above will result in signs of dental problems. These signs include difficulty chewing, dropping feed, slow eating, and weight loss. Incompletely ground feed is not digested and absorbed efficiently, resulting in weight loss or colic.

THE EQUINE DENTAL EXAMINATION

There is more to equine dentistry than just “floating” a horse’s teeth. The idea behind dental health maintenance should be to preserve maximal, comfortable grinding of feed for as many years as possible. How frequently a horse needs to have dental care for optimum health depends on age, management, genetics and many other factors. The key is that all horses should have careful dental examination on a regular basis.

Proper equine dentistry starts with a thorough history, physical exam and an understanding of that particular horses and client’s needs. A thorough dental exam is a critical part of quality equine dentistry. It requires good instruments, good light and lots of experience to do well. Regular dental exams and maintenance will prevent larger problems later and can be thought of as an investment in the future of a horse. Ultimately, the most important part of sensible equine dental care is getting good advice from a veterinarian who understands equine dental health as it relates to the health of the whole horse.

In [Part II](#) of this article, I discuss some of the facts, confusion and controversy that surround equine dentistry that is done for performance enhancement.

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