Newly Approved Drugs for Navicular Treatment

Recently, two new drugs have been approved for use in horses by the FDA for the treatment of Navicular Syndrome. These drugs will be available by the end of 2014 or the beginning of 2015. These two drugs, Tildren® (tiludronate) and Osphos® (clodronate) are from a class of drugs known as bisphosphonates, which alter bone production and destruction. This is especially helpful in cases of Navicular Syndrome.

Navicular Syndrome is a general term for heel pain in horses that is accompanied by x-ray evidence of changes to the Navicular bone. Most often, this is seen as lameness of both front feet, usually with one foot being worse than the other. Horses with Navicular Syndrome oftentimes are sore to hoof testers across their heels. When the foot displaying the worst lameness is blocked, horses will oftentimes go lame on the opposite foot. X-rays of this area usually show changes to the Navicular bone, which can include changes to the surfaces of the bone, larger than normal holes in the center, and sclerosis (hardening).

Gone are the days where we refer to pain in the heels as Navicular Disease. With the advent of MRI, people are realizing that there is so much more than just changes in the Navicular bone that cause symptoms of heel pain. While the Navicular bone is often a source of pain in Navicular Syndrome, there are a large amount of soft tissue structures surrounding the Navicular bone that can also be causing pain. These structures include the Deep Digital Flexor Tendon, the Impar ligament, the Suspensory Ligament of the Navicular Bone, the Navicular Bursa, and others. This is important to know because Tildren® and Osphos® are specifically for treating problems in the BONE. They do not treat problems of the soft tissues.

As mentioned before, bisphosphonates like Tildren® and Osphos® alter the production and destruction of bone. In the human world, bisphosphonates have been around for several years and are used in treating bone pain in cases like severe arthritis and bone cancer. When a bone is damaged, two types of cells go to work. These are called osteoBLASTS (make new bone) and osteoCLASTS (eat damaged bone). OsteoCLASTS work much faster than osteoBLASTS, as it takes much longer to make new bone than it does to eat up damaged bone. Bisphosphonates even out the pace of bone production and bone destruction by killing osteoCLASTS, which can help alleviate some of the pain associated with bone disease. As we already know, some of the pain associated with Navicular Syndrome comes directly from the Navicular bone itself. By altering the pace of bone destruction, some of the pain coming from the Navicular bone can be eased.

Recent studies on Tildren® and Osphos® have shown that both drugs are helpful in the treatment of pain coming from the Navicular bone. Tildren® is the more expensive drug of the two, but the studies on Tildren® show it lasting longer than Osphos®, which only followed horses in their studies for six months. Tildren® has also been shown to help alleviate pain associated with bone spavin (hock arthritis), whereas Osphos® has had no studies to show the effects of pain associated with arthritis.

Both Tildren® and Osphos® have similar side effects, which usually occur in less than 1% of horses. The most often seen side effects are colic and neurologic symptoms. When Tildren® is given in the vein over a longer period of time (90 minutes), the risk of colic goes down even more. Osphos® does not have this option as it is a muscular injection. In all the horses that showed side effects, the symptoms were mild and usually wore off with 15 minutes of walking. Very few horses needed to be treated with Banamine. Neurologic symptoms include yawning, flehmen, and head shaking, which wear off quickly. Bisphosphonates should not be given to pregnant or nursing mares, and young horses, as it could alter bone development in growing animals.

If you have questions about bisphosphonates or Navicular Syndrome, contact your veterinarian. Set up an appointment today to see if Tildren® or Osphos® is right for your horse.