French Drug Shows Potential As New Navicular Therapy

A medication originally developed to treat bone disease in people may reduce lameness in horses with navicular disease by regulating the remodeling of the navicular bone itself.

The drug called Tildren, contains the active ingredient tiludronate, which was initially developed to treat Paget's disease, a human disorder characterized by irregularly formed and weak bone tissue. "Tiludronate belongs to the therapeutic class of biphosphonates, which inhibit bone resorption," explains Donimique Thibaud, DVM, of the French pharmaceutical company CEVA Sante' Animale. "By doing so, tiludronate also decreases bone formation and remodeling. The result is usually an increase in bone density without impairing the bone's capacity to adapt to mechanical load."

Intrigued by tiludronate's potential equine applications, the French researchers conducted a study based on 73 horses with either a recent onset of or chronic navicular disease, including bone lesions. Initially, lameness exams were done on the horses and their navicular bones were radiographed. Then the horses were divided into three groups: One group received daily tiludronate injections for five days, a second group was given the injections for 10 days, and the remaining horses received a placebo treatment.

During the study period, the horses were ridden or exercised regularly. A second series of radiographs was taken at the end of the study period and lameness examinations were conducted. The examinations were repeated one month, two months and six months afterward. When the researchers analyzed the data, they found that horses treated with tiludronate for 10 days showed marked improvement in soundness and typically returned to their normal level of work in two to six months. The horses on the five-day regimen did not improve significantly, the researchers report. The radiographs taken for the study were not sensitive enough to detect changes in bone density, says Thibaud, but a still-unpublished follow-up study suggests that tiludronate increases navicular bone density 5 to 10 percent.

How long the drug's effects will last remains to be seen, but Thibaud is encouraged by the early results. "This study showed clinical improvement is still noticeable six months after a single course of treatment in horses with recent onset," he says. Tiludronate-based drugs are approved for human use in the United States. *(from EQUUS 313, November 2003)*