Vet Call

►by **Bob Larson,** *professor of production medicine, Kansas State University*

Seminal Vesiculitis

A common problem found when a veterinarian does a breeding soundness examination of bulls is seminal vesiculitis (or inflammation of the vesicular glands). These glands — along with other glands such as the prostate — secrete fluid that transports sperm during ejaculation. When healthy, the vesicular glands look like (and feel like) two clusters of small grapes that lay on the floor of the pelvis.

No outward signs

Most bulls that have vesiculitis do not show any signs of being sick or in discomfort. Occasionally, if the disease is bad enough to cause the vesicular glands to form an abscess, bulls will show signs of pain, including an arched back, reduced appetite, or hesitation in mounting and thrusting.

Seminal vesiculitis is usually discovered when the veterinarian is doing a rectal palpation during a breeding soundness examination or when white blood cells are seen when the semen is examined under the microscope. On palpation, inflamed vesicular glands feel smooth and distended rather than like a cluster of grapes. Some bulls display a pain response when the glands are palpated.

The semen of bulls with vesiculitis may have a visible brownish discoloration or may be blood-tinged. When semen from bulls with vesiculitis is examined under a microscope, the veterinarian will find white blood cells mixed with the sperm cells. Semen quality will vary among affected bulls, and although lowered fertility can be associated with seminal vesiculitis, some affected bulls are able to have normal to near-normal pregnancy rates. Researchers have reported that bulls with seminal vesiculitis are less likely to have semen of satisfactory quality than unaffected bulls.

Often, bulls with seminal vesiculitis also have disease in other parts of the reproductive tract. If sperm cells appear abnormal when examined under a microscope (in addition to white blood cells in the sample), that is an indication that the testicles or epididymis also has problems.

Seminal vesiculitis is primarily found in two different age populations, young bulls near puberty and older bulls. Although the exact cause of vesiculitis is not known, it has been shown that young bulls housed in group confinement and fed high-energy diets are at greater risk for the disease compared to bulls reared in a range environment.

Many young bulls with vesiculitis will recover after several months whether or not they are treated with antibiotics. The problem is that at the time of diagnosis it is impossible to determine whether a particular bull will recover. In contrast, older bulls with vesiculitis seldom are able to clear the infection even with aggressive antibiotic and even surgical therapy.

Treatment options and prevention

Treatment of seminal vesiculitis with antibiotics or surgery is only somewhat rewarding, but if treatment is attempted, it is best if an uncontaminated sample of fluid from the vesicular glands can be obtained by sterilely passing a small plastic tube up the penis. The fluid should be cultured and if no bacteria are found, antibiotic therapy is not indicated. If bacteria are found, they should be identified and antibiotic sensitivity should be determined.

Bacterial seminal vesiculitis requires prolonged treatment (>30 days) with antibiotics that reach effective concentrations in the vesicular glands. It must be remembered that extra-label usage of any compound must be addressed, and a prolonged withdrawal time must be observed if the animal is to be sent to slaughter.

Surgical removal of the affected vesicular glands is sometimes attempted in valuable older bulls, but overall success is poor. Upon returning to service after surgery, bulls can exhibit a decrease in semen motility, volume and sperm output.

Older bulls that have long-term seminal vesiculitis with adhesions of the gland to the pelvic floor or wall are poor candidates for surgery.

The diagnosis of seminal vesiculitis is fairly common but often frustrating for both producers and veterinarians. When the diagnosis is made, the producer and veterinarian need to sit down and discuss the options that are available and the expected time to a best-case outcome so that enough sound bulls are available for the breeding season.

Bacterial seminal vesiculitis requires prolonged treatment (>30 days) with antibiotics that reach effective concentrations in the vesicular glands. It must be remembered that extra-label usage of any compound must be addressed, and a prolonged withdrawal time must be observed if the animal is to be sent to slaughter.

Because we don't fully understand the causes of seminal vesiculitis, it is difficult to plan a prevention strategy. I usually advise that the overall health and management of young bulls be addressed when a high percentage are diagnosed with vesiculitis.

Young bulls should be fed a diet that promotes adequate but not excessive weight gain, and the bulls should be housed in an area free from mud and with protection from temperature extremes. They should have plenty of room to exercise and adequate bunk space and water access. The bulls should be vaccinated against common viral and bacterial diseases and should receive routine internal and external parasite control.

Bulls that are diagnosed with vesiculitis should be examined one or more times over the next few weeks to determine if the condition is improving, remaining stable or deteriorating. Bulls that do not show improvement over several weeks are less likely to be able to be highly fertile in a rapidly approaching breeding season.

E-MAIL: rlarson@vet.ksu.edu