

Retained male organ not uncommon problem in horses

For *The Love Of Horses*
By Frank J. Buchman

Cryptorchid is a big word for most people.

Usually, many cowboys don't have ever know the meaning of the word. Yet, they sure know how bad the situation can be when their male horse doesn't have but one visible male organ, or none at all. For the predicament, they'll typically use a more blunt term, which often makes others embarrassed.

Therefore, the more congenial types describe the situation as "a stallion with only one testicle descended or no testicles down."

Scientifically, when one or both testicles, or testes, are not descended in the scrotum, the male horse is called a rig, ridgling or a cryptorchid.

Interestingly, cryptorchidism is a developmental defect in both animals and humans.

It is important in the horse because the retained testis does not produce fertile sperm but does produce testosterone which gives the stallion its behavioral characteristics," emphasized Dr. Patrick McCue, equine veterinarian at Colorado State University, Fort Collins.

While cryptorchid testes are more prone to developing tumors compared to descended testes, the problems with determining the situation, complications of and markedly increased cost of castration are what most affect those who own cryptorchids.

Testes begin to form in the abdomen of male fetuses near the kidneys. "The testes pass through a space called the inguinal canal between nine and 10 months of age and are usually fully descended into the scrotum between 30 days before and 10 days after birth," McCue explained.

However, many horsemen can relate instances when they had colts with no descended testicles, but "their nuts came down when the horse became older." McCue agreed, "Although documentation is limited, some inguinal retained testes have been reported to enter the scrotum in horses as old as two to three years of age."

Three different forms of cryptorchidism are observed in horses: under the skin in the inguinal area called a high flanker, in the inguinal canal and in the abdomen.

In one study, the failure of the left and right tes-

ticles to descend into the scrotum occurs with nearly equal frequency. However, the left testicle is found in the abdomen in 75 percent of cryptorchid horses compared to 42 percent of right testicles.

"Bilateral cryptorchids, those with both undescended testicles, and monorchid horses, those with only one developed testicle, are uncommon," McCue detailed. "In bilateral cryptorchids, most of the time both testes are abdominal."

The retention of testes is a complex, incompletely understood process involving genetic, hormonal and mechanical factors. In dogs, it is believed to be an autosomal sex-linked recessive gene.

However, McCue related, "Cause might be due to genetic predisposition, insufficient testosterone stimulation or other factors."

Cryptorchid testes are incapable of producing sperm due to the elevated temperature of the retained testes.

"Consequently, a stallion is sterile if both testes are cryptorchid," McCue clarified. "Stallions with one retained testis and one scrotal testis are usually fertile because an ad-

equated number of motile sperm are produced by the descended testis to impregnate mares.

"Sex drive and aggressive male behavior is present in cryptorchid stallions because the retained testes still produce testosterone," added McCue.

Many local veterinarians will not attempt to castrate cryptorchids, because of the difficulty and complications that can arise during the procedure. A cryptorchid testis is significantly smaller than the normal scrotal testis and hard to locate without expensive medical instruments.

Thus, those stallions with undescended testes must usually be taken to a veterinarian who specializes in and has experience with that type of surgery.

Although it has been typically denied, a problem has sometimes arisen when a cowboy would do his own castration of a cryptorchid horse, taking the descended testicle and leaving the other testicle invisibly retained in the horse.

In many situations of this type, the horse would be merchandized as a gelding, because there were no outward obvious indications that was not

completed. The horses in both instances are referred to by cowboys, and some professionals, as "proud cut."

"Until recently, the only surgical technique for removal of retained testes was laparotomy under general anesthesia," explained Dr. Ludovic Boure, renowned equine surgeon for the Ontario Veterinary College at the University of Guelph in Ontario, Canada.

Now, laparoscopy under general anesthesia and laparoscopy while standing have been used to treat cryptorchidism in horses.

"Laparotomy is the surgical opening of the abdomen under general anesthesia by several surgical approaches including an inguinal approach with or without retrieval of the inguinal extension of the testis, an approach to the side of the inguinal ring or, less commonly, a flank approach," Boure described.

With modern instruments, laparoscopy is an endoscopic procedure where a fiber-optic video camera and surgical instruments are introduced into the abdomen through a small incision.

"Laparoscopy can be used to remove retained abdominal testes in horses," noted Boure.

Standing laparoscopy is performed under local anesthesia and tranquilization with the horse restrained in a set of stocks. It is relatively painless and minimally invasive, the veterinarian insisted.

"Both laparoscopic methods involve minimal invasion and pain, but require more extensive equipment and specialized training to perform than open surgical procedures," Boure emphasized.

infection in the abdomen, fluid build-up in the vaginal tunic which surrounds the testes, damage to the penis and continued stallion-like behavior may occur, Boure warned.

Sometimes it is necessary to determine whether a horse with no palpable testis, yet displays a stallion-like behavior, is a bilateral cryptorchid, a cryptorchid that has its descended testis removed or a gelding with behavior problems.

"These stallion-like horses can be a major source of frustration and cause aggravation to mares, which are in heat, and a danger to their handlers," Boure stressed.

Veterinary examination might be required to determine if a horse is a true gelding or a cryptorchid.

This might be done through an examination of the external inguinal region, by rectal palpation ultrasound examination or hormonal testing.

Estrogen testing for cryptorchidism is not considered to be of diagnostic value in young horses.

"Medical treatment to stimulate descent of retained testes is controversial in regard to both effectiveness and ethics," McCue commented.

Although sporadic anecdotal reports suggest that hormone administration might have aided in testicular descent in some horses, the general opinion is that medical treatment is not effective.

"It is recommended that cryptorchid male horses be castrated and not used for breeding," McCue and Boure agreed.

Complications can arise during normal castration as well as with the removal of retained testes. In routine castration, horses will experience various degrees of postoperative swelling.

On rare occasions, intestinal prolapse, infection of the spermatic cord,

the case.

However, new owners soon find out from the distinctive aggressive behavior of their horse around other horses, specifically cycling mares, that in reality they own a stallion.

This same attitude also occurs infrequently when a normal castration procedure is not thoroughly

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