

An “Original” Article about Geldings

By Kirk Heisterkamp, DVM

Scenario 1: Your newly purchased “gelding” is periodically aggressive and difficult to handle. He sometimes acts just like a stallion, but he doesn't have any visible testicles. The “cowboy” neighbor says, “You have bought yourself a 'rig'.”

Scenario 2: The veterinarian examines your young colt prior to performing castration and diagnoses him as a “cryptorchid”.

So, what is a “cryptorchid”? What is a “rig”?

The word cryptorchid means “hidden testicle”. Cryptorchidism is an abnormality of testicular position and is the most common nonlethal congenital defect in the horse. Cryptorchidism is failure of one or both testicles to descend into the scrotum. The testicles can be inside the abdominal cavity or in the inguinal canal (“high flanker”). A horse with this condition is referred to as a cryptorchid.

Common names for cryptorchid horses are “rig”, “ridgling”, or “original”.

About one of every one hundred colts is a cryptorchid. Percherons, Quarter Horses, and American Saddlebreds are the breeds most commonly found with this condition. It is least common in Thoroughbreds, Standardbreds, Morgans and Tennessee Walking Horses. Other breeds fall somewhere in the middle.

Left and right testicles are affected equally, but left cryptorchid testicles are twice as likely to be inside the abdominal cavity as compared to right cryptorchid testicles. Having both left and right cryptorchid testicles occurs in ~14% of affected horses and ~8% of these cases have both testicles inside the abdomen.

The cause of cryptorchidism is unknown. However, studies would indicate that a complex hereditary process involving both the stallion and mare is at play. It is generally advised to not use cryptorchid stallions for breeding. Mares that produce cryptorchid colts from breeding to a normal stallion are also questionable reproductive candidates.

The increased body temperature surrounding a cryptorchid testicle reduces sperm production, but testosterone production is not affected. Therefore, cryptorchid stallions are subfertile but maintain normal stallion behavior. A “gelding” that has had only the descended testicle removed will still produce testosterone in adequate levels to behave like a stallion.

Prior to purchasing a gelding, check on his castration history, even if you have to trace back to the owner who had him gelded. Beware of the “gelding” with no available castration history, which has changed ownership several times and exhibits questionable behavior.

When is a good time to castrate colts?

I recommend “brain surgery” between six and twelve months of age. If a colt is found to be a cryptorchid at this time, it is very unlikely that the undescended testicle will come down into the scrotum with more time. Horses castrated at less than twelve months of age experience far less post surgical complications, such as excessive bleeding and swelling.

Some horse people believe that colts gelded prior to two years of age do not fully physically mature. This concept is totally incorrect. It has been shown that by gelding at a young age, the horse will grow taller than its intact cropmates.

Cryptorchidism is a straightforward diagnosis in colts greater than six months of age, when and only when it is positively known that no attempt has been made to castrate them in the past. The real diagnostic challenge is the horse that has had the normal descended testicle removed and the cryptorchid testicle left behind. Both of the above horses appear to be geldings, but when the behavior problems start to show, then the mystery begins.

Blood testing of the horses with unknown surgical history is the most accurate way of diagnosing cryptorchidism. Rectal and inguinal palpation, as well as ultrasound examinations, can be helpful in determining the location of a cryptorchid testicle. Scar tissue does not guarantee that a castration attempt was successful in removing both testicles. It is best to confirm the presence of both testicles before proceeding with a routine castration, especially when performing surgery on the farm. It is very important to visually confirm the presence of both testicles at surgery, rarely some colts will have a loop of spermatic cord descended while the testicle remains in the abdomen.

Surgical removal of retained testicles is the only treatment for cryptorchidism. The surgical degree of difficulty depends entirely on whether the cryptorchid testicle is located in the abdominal cavity or in the inguinal canal. The most challenging cases involve horses that have an unknown castration history and scar tissue evidence of prior surgery; you don't know if only one testicle remains or on which side it may be located.

Several surgical approaches are used in removal of cryptorchid testicles, including laparoscopy. Because all surgical approaches potentially involve entering the horse's abdominal cavity, it is this author's opinion that this procedure should always be attempted in a clean, dust free, hospital environment; not in the front lawn, pasture, dusty arena, stall or barn alleyway with hay bales.

Once a cryptorchid is surgically corrected, it can take up to six weeks for testosterone levels to decline and for behavior issues to improve. The majority (approximately 80%) of corrected cryptorchids will show dramatic improvement in behavior. Long-standing cryptorchids may not show behavior improvement as profound as that shown in horses diagnosed and corrected at a young age.

Geldings and mares can sometimes exhibit aggressive, contrary behavior for no obvious medical reason. Stallion-like behavior in an older gelding that has been normal for many years, is most likely not related to cryptorchidism.

Some geldings with objectionable behavior are found to have excessively long spermatic cord remnants on palpation of the scrotal / inguinal area. These geldings are often referred to as being "proud cut". Surgical amputation of the long cord remnants can improve behavior in some of these geldings. It is advisable to perform blood testing on these geldings to rule out the presence of testicular tissue prior to surgery.

Horses born with only one testicle, termed monorchidism, are very rare and should be considered a cryptorchid until proven otherwise. This author has heard numerous reports of "third" testicles but presumes these cases to be additional attempts at cryptorchid testicles.

Castration, performed properly, does not always ensure elimination of poor behavior. One study showed that up to 30% of colts gelded prior to puberty continued to exhibit aggression towards other horses and stallion-like sexual behavior.

In conclusion, experienced veterinary assistance, with respect to routine castration procedures and researching the history of any gelding prior to purchase, will help you avoid the headaches of cryptorchidism.