



The Friesian

Veterinary Matters - Gelding

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Gelding a stallion is an operation that requires care. There are various methods to geld stallions. Basically, there are two types of castration: those performed on horses that are lying down and those performed on horses standing up. In addition, a veterinarian can choose between the covered, partially covered, and uncovered gelding methods.

The longer you wait with gelding a stallion, the longer the horse will display the behavior it had before the procedure. Undesired stallion behavior is often the deciding factor in the decision as to whether to geld or not. Well known is the discussion about the timing of gelding and the influence on body size. If gelding is postponed, the male hormones, such as testosterone, will mature growth (plates) in the bones and thus close them. These growth plates are located at the ends of the long bones and are responsible for the longitudinal growth of the horse. Influenced by testosterone, the horse's bones will mature. This will stop the regular body growth. For a horse that is gelded relatively early, before sexual maturity, this maturation of the bones will take place at a later stage, which extends the longitudinal growth. Do not forget, however, that the real body size of a horse is genetically determined. The earlier or later closing of the growth plates is of marginal influence.

Lying Down or Standing

Basically we can differentiate between gelding a horse that is lying down under anesthesia or gelding a horse that is standing. Both methods have pros and cons. It's advised to always fully anaesthetize and thus geld while lying down, stallions that are older than three years, stallions with very large testicles, with deviating inguinal openings, and cryptorchid stallions. In this case the veterinarian can better oversee the area to be operated on and it can be done in a more sterile manner. In emergency situations quick action can be taken. Also the risk of injury to the operating veterinarian is minimal. Horses suffer the least from this operation method. The higher cost and the risk of general anesthesia are sometimes an obstacle. General anesthesia in Friesian horses, when compared to other breeds, is a larger risk. The wounds generally heal better after an operation lying down.

Gelding a stallion while he is standing up is still done every day. The latest development in this area is an operation technique from the side of the abdomen. The vas deferens and the blood vessels are crimped in the abdominal cavity through an arthroscopic operation (endoscope). The testicles are removed through the created abdominal wall opening. The veterinarian can also leave the testicles behind in the abdominal cavity where they will subsequently shrivel up. This new technique for a standing operation can only take place at a clinic. The long-term results of this method are not yet known.

The regular method, in which a stallion is standing up, has a number of benefits in comparison to the method with the horse lying down. With the right technique and good skill this method is quick and relatively cheap. The operation usually takes place at home, in familiar surroundings for the horse. The down sides are the somewhat higher risk for the veterinarian, less visual overview of the operation wound, and because of this, possibly a bit less sterility. In case of unexpected complications such as an inguinal rupture and intestinal prolaps (when the intestine comes out through the inguinal canal) quick action cannot always be taken at home. This can, in a worst case scenario, have dire consequences.

Methods

A veterinarian can apply three different methods in the standing gelding procedure. They are called the covered, half-covered, and uncovered gelding methods. With all methods the veterinarian will use an emasculator with which the vas deferens and the connected blood vessels are crimped and bruised. Then these may or may not be completely sutured. The scrotum will, in general, not be sutured because the wound needs to be able to drain as much as possible. The difference between the three methods is whether or not the abdominal cavity needs to be opened up and if so, when.

With the covered method, the veterinarian cuts into the skin of the scrotum - the testicles, covered by the peritoneum, are not cut into. Next, the vas deferences and the blood vessels are crimped and bruised by the emasculator. By further tying off

the testicles with sutures in this crimped notch, the veterinarian castrates "covered up." The abdominal cavity is not opened up with the covered method and that is a big advantage. The disadvantage is that it cannot always be determined if both testicles have been tied off or cut off, perhaps another area for veterinary science to work on. For that reason, the covered method is rarely ever used at this time.

In the half-covered method the veterinarian cuts into the scrotum, as well as the peritoneum. He thus opens up the abdominal cavity. You can see that by the watery abdominal fluid that leaks from the abdominal cavity. After this cutting, the veterinarian loosens up the skin of the scrotum from the derma and he places the emasculator above the testicles onto the vas deferens with the blood vessels. The incised peritoneum rim is not to be bruised as well. The suture is put in the spot of the bruising (indentation) and the veterinarian will cut the hanging parts below. Characteristic for the half-covered is the opening of the abdominal cavity through which the testicles are clearly visible and, immediately following, the closing of this cavity with sutures. A possible infection towards the abdominal cavity is minimal with this method. During the operation the veterinarian has an optimal view of the testicles. The half-covered method is strongly preferred by most veterinarians.

In the uncovered method, the veterinarian opens up the abdominal cavity and he places the emasculator onto the uncovered vas deferens and blood vessels. After this, the sutures are applied and the abdominal cavity will remain completely open. There is a chance that the abdominal cavity can become infected, with all kinds of potentially life threatening consequences.

Some veterinarians geld stallions with the half-covered method and then use two emasculators alongside each other. No sutures will be applied in the bruised spots of the vas deferens and blood vessels. These will be left open. Bruising the blood vessels and the vas deferens in multiple spots usually results in a rapid and effective coagulation of the blood. In case of unexpected

after bleeding, the risk of continual bleeding, and sometimes hemorrhaging, is rather large. This method is therefore not completely without danger. If everything does go well, the rapid healing of the wound is a great advantage. The castration wound generally shows little swelling because the veterinarian did not tie anything off. Also, the risk of the occurrence of a castration fistula is, in contrast to the other two methods, absent.

Cryptorchid Stallions

In normal stallions, the testicles lie in a bulged-out part of the peritoneum. From the outside this is visible as the scrotum in which both testicles are located. Usually around or shortly after the time of birth, the testicles will start to descend into the scrotum and, although small, they can be felt. Sometimes they can, however, descend a considerable time after birth. They may even take up to six to twelve months. Depending on the outside temperature, the testicles lie either pulled up or let loose between the hind legs, under the abdomen. If one or both testicles cannot be felt from the outside and have, thus, not descended, then we talk about a unilateral or bilateral cryptorchid stallion. The Friesian breed is seen to have cryptorchid stallions regularly. Many stories go around about influencing the descent of retained testicles. Certain medications can be administered with varying degrees of success. Sometimes live cover can influence a quicker descent of the testicles but this option is not a guarantee. Cryptorchid stallions should not be gelded too late. Among other things, a high temperature in the abdominal cavity around the retained testicles can alter into tumors. Those who wonder if their horse is still cryptorchid can request a blood test. A gelding with obvious stallion mannerisms is possibly a bilateral cryptorchid stallion. There can be various reasons that testicles do not descend. It especially has to do with the size of the inguinal canal, which is genetically determined. An inguinal canal that is too small can point to a cryptorchid stallion. An inguinal canal that is too large can lead to an inguinal rupture through which the intestines sink into the inguinal canal. An extension is a scrotum rupture through which the intestines enter the scrotum. Both situations usually cause serious cases of colic. Usually an operation is necessary and the stallion will be gelded at the same time.

Continued...



Healthy Friesian youngsters. Photography by Patricia Hancock/Knightwing Photography©. seanbat@aol.com.



Gelding, cont.

The Procedure

Before the veterinarian can start the gelding procedure, he will review the overall health of the stallion. Heart and lungs are checked for deviations. Then the tail is wrapped with bandaging. The veterinarian will examine the testicles and the size of the inguinal canal. If everything is in order, the horse will be sedated and the testicles will be washed and disinfected. Local anesthetic of the vas deferens and the skin of the scrotum follows. The second sedation in the blood flow of the horse will make sure that the horse is even less conscious, but can still stand. This second injection usually contains a strong painkiller that strengthens the sedation. To be sure, I apply the twitch briefly after this and I sterilize the testicles again. I follow with the half-covered gelding method - the skin of the scrotum is usually left open to more easily have excess fluid drain from the wound. To prevent wound infections - by, among other things, flies - spring and fall is the best time to geld. I leave the horses in their stall for the remainder of the day of the operation. Don't allow operated horses to eat while partially still sedated.

The first day requires that the owner keep a close eye on the wound, but the draining of wound fluid or small blood vessels usually does not require further treatment. This draining can last for several days. Cool the operation wound during the first week, once to twice a day, with cold water. This is not pleasant for the horse the first time it is done, but after a few days, most horses allow the cooling and massage. A good tetanus protection and/or possibly an antibiotic are part of the standard after treatment. Give the gelding controlled exercise during the first weeks after the operation the gelding can be put back to work normally. Be aware that even a gelded stallion can still impregnate mares for some time (several weeks). If it's the intent to geld a stallion, don't wait too long. Young horses are not bothered as much by the procedure as older horses.



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