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CRYPTORCHID (RIG) FACT SHEET

When is a Gelding not a Gelding?

When it's Cryptorchid!

What is a Cryptorchid?

A cryptorchid horse, or 'rig' as it is commonly known, has one or both testicles retained in the inguinal canal or abdominal cavity. If the descended testicle has been removed, the horse will look like a gelding but will have stallion-like behaviour due to production of testosterone and other male hormones by the retained testicle. For this reason, horses with only one descended testicle should never have just the descended testicle removed.

How does it happen?

Foetal testicles are located behind the kidneys, high up in the abdominal cavity, in early pregnancy. As the foetus develops, the testicles start to descend towards the inguinal canal and usually pass through the canal and into the scrotum during the final weeks of pregnancy.

The testicle can be retained anywhere along its descent. Cryptorchids are classified as 'abdominal' or 'inguinal', depending on the location of the retained testicle. Inguinal retention is by far the more common of the two.

Inguinal retention is when the retained testicle is positioned in the inguinal canal. It can be further described as either a temporary or permanent.

Temporary retention occurs mainly in ponies with small testicles. This condition usually involves only one testicle and, for some reason, in 75% of cases it is the right side. The retained testicle can occasionally be felt in the inguinal canal but usually the horse has to be sedated to allow confirmation of its position. If left alone, the retained testicle usually descends into the scrotum by the time the horse is three years old.

Permanent inguinal retention can occur in any horse and is characterised by normal sized testicles. Horses with this type of retention are often referred to as 'high flankers'. Again this condition usually involves only one testicle and this time both right and left sides are equally affected. The retained testicle can be difficult to palpate even in a sedated horse.

Abdominal retention is when the testicle is still within the abdominal cavity. This type of retention can be further described as being complete or incomplete.

Complete abdominal retention is where both the testicle and the epididymus are retained within the abdomen. These testicles are usually quite small as they fail to develop properly due to the higher abdominal temperature. They are also fairly mobile within the abdomen and may become mixed up with coils of intestine. These factors can make them very tricky to locate at surgery!

Incomplete abdominal retention is where part of the epididymus is located in the inguinal canal but the rest of the testicle is in the abdomen.

How is a Cryptorchid Diagnosed?

Horses usually retract their testicles into the inguinal canal unless sedated and so the first thing your vet may do is sedate your horse. With sedation, it may be possible to feel part or all of a testicle in the inguinal canal. If a testicle can not be felt in the inguinal canal, blood tests to confirm the presence of testicular tissue within the abdomen must be performed.

There are two tests available, which one is used, depends on age. In horses three years and older, a single blood sample can be taken for determination of a hormone called oestrone sulphate. Cryptorchids have levels four to five times higher than geldings. If the horse is less than three years of age, paired blood samples are necessary to measure testosterone levels before and after an HCG injection, a drug that stimulates testosterone release from the testicles. If the level in the second blood sample (taken 60 minutes after the administration of HCG) is higher than the pre-injection sample, it confirms the presence of testicular tissue.

So now what?

Cryptorchidism is inherited; therefore the only case for not castrating a cryptorchid horse is when temporary inguinal retention is suspected. However, if the retained testicle has not descended into the scrotum by three years of age, the horse should be castrated.

Castrating a cryptorchid is obviously more involved than a normal castration, particularly if the testicle is within the abdomen. Testicles retained in the abdomen are usually removed by laparoscopy (keyhole surgery) under standing sedation at the Dick Vet Equine Hospital as this avoids an abdominal incision and vastly reduces convalescence time.