

Health and welfare information about your horse from Vetlexicon Equis.



Bladder rupture

Rupture of the urinary bladder is one of the most common conditions of the urinary tract affecting new born foals and is a potentially life-threatening condition so early recognition is essential.

What is bladder rupture?

Traditionally bladder rupture has been thought to be present most frequently in the first 24-36 hours after parturition; however, studies have shown that it can develop later in life, with the average age of diagnosis being approximately 6 days.

Although there is the perception that male foals are more commonly affected, the latest research suggests that filly foals may be equally affected.

Dystocia (difficulty in giving birth) or other complications during parturition are associated with uroperitoneum (urine in the peritoneal cavity). However, there is evidence to suggest that it can sometimes be due to a failure of the dorsal bladder wall to close during pregnancy.

How do I know if my foal has bladder rupture?

Affected foals are usually normal at birth and commonly the first sign you may notice is that the foal is "off suck". Failure to pass urine or passing small amounts may also be noticed, together with a stretched-out stance. Inappetence and mild abdominal discomfort (colic) are sometimes present. Your foal's abdomen may start to look progressively more distended, and with time fluid waves can often be seen across the abdomen. No fever is usually present, but your foal may breathe faster and with some difficulties.

Sometimes it is not the bladder itself but another structure of the urinary tract that ruptures. Rupture of the urethra (the exit duct of the bladder) usually shows as fluid in the sheath and scrotum, and it can be confused with a hernia. Rupture of the ureter (the duct that connects the kidney to the bladder) is more often traumatic in origin and associated with fractured ribs.

What will my vet do to confirm the diagnosis?

First of all your vet will perform a full clinical examination to rule out other problems. They may perform abdominal palpation which could reveal a fluid distended abdomen, and sometimes fluid thrill (vibration) can also be felt on percussion.

Your vet may elect to take some blood samples to assess your foal's condition. Blood analysis may reveal electrolyte abnormalities (particularly important are high levels of potassium in the blood), acidosis (low blood pH) and azotaemia (elevated blood urea and creatinine; these are two waste products of the body metabolism that are usually eliminated in the urine).

Ultrasound examination may also be performed. This is a very useful diagnostic aid, allowing visualisation of large amounts of free fluid within the abdomen. In many cases the bladder can also be visualised and it is usually mis-shapen.

Abdominocentesis (collection of a sample of the fluid in the abdomen) may also be performed and the fluid obtained analysed. This will reveal a high creatinine level (with these levels being higher than those in the blood).

What can a ruptured bladder be confused with?

Foals with a ruptured bladder will be dull and quiet, so it is important to rule out other conditions that will also make a foal look depressed such as septicaemia (generalised infection), neurological disorders if the foal is weak, comatose or seizing, prematurity (foal born too early) or dysmaturity (foal born at term, but that shows signs of prematurity) or perinatal asphyxia syndrome (dummy foal).

Meconium impaction or failure by the foal to pass the first droppings should also be ruled out, as the foal will adopt a very similar stretched out stance.

Can bladder rupture be treated?

A ruptured bladder should always be treated as an emergency and your foal will probably have to be transported to a referral hospital.

It is important that the metabolic abnormalities are stabilised before surgery to correct the defect in the bladder wall is attempted.

Correction of the fluid and electrolyte imbalances is essential. This is achieved by the administration of intravenous fluids. Particularly important is correction of the acidosis and the high blood potassium levels as this causes low heart rate and blood pressure, arrhythmias and ultimately death; therefore, your vet will continuously monitor the foals cardiac activity with an electrocardiogram (ECG).

All the fluid in the abdomen should be drained before surgery. This will help correct the acidosis and reduce the hyperkalaemia and azotaemia. This can be achieved under sedation with the help of a cow teat cannula.

Once the metabolic status of the foal has been stabilised, surgery can be attempted. The surgical technique is usually straightforward, but the problems of anaesthesia are usually considerable.

In order to reduce the risk of post-operative rupture of the bladder or leakage along the

suture line, the vet will probably place a urinary catheter for several days to avoid overfilling of the bladder.

Your foal will also receive broad spectrum antibiotics to prevent any possible infection following surgery.