

Extrahepatic Portosystemic Shunt (PSS)

INFORMATION SHEET



Ameroid constrictor

What is a PSS?

A portosystemic shunt is where an abnormal blood vessel carrying blood from the intestines bypasses the liver and enters the general circulation. The liver should remove all the toxins from the intestine and if the liver is bypassed, these toxins reach the general circulation. This can result in numerous signs including gastrointestinal disease (vomiting/diarrhoea), bladder stones, neurological signs (seizures, vacant episodes) as well as reduced growth. This abnormal blood vessel is evident from birth and small/toy breeds esp. Yorkshire and Cairn Terriers are predisposed.

How do we investigate a PSS?

Routine blood and liver function tests (bile acid stimulation test) are performed. Urinalysis and culture will identify any bladder stones. Imaging with abdominal ultrasonography or CT will identify the abnormal blood vessel. A special dye or contrast agent is injected into one of the veins to highlight the abnormal blood vessel.

How can we treat PSS?

Medical management with dietary modification, antibiotics and laxatives will improve the clinical signs. However most cases do better in the long-term with surgery. Surgery involves closing the abnormal vessel - this will redirect the blood flow back to the liver. The abnormal blood vessel is usually partially closed at surgery (with medical grade cellophane or an Ameroid constrictor) and should continue to close over the following 4-6 weeks. The slow closure of the blood vessel allows the liver to adapt to the increased amount of blood passing through it, resulting in less post-operative complications. Bladder stones may require removal at the time of shunt closure.

What kind of aftercare is required following a PSS?

Your pet will be hospitalised for 1-2 days. Your pet will be discharged with pain relief. Suture removal will be required 7-10 days post-operatively. A buster collar will be required until suture removal. Only short lead exercise is allowed until suture removal. Your pet will require 2-3 months of continued medical management whilst the shunt closes and the liver regenerates. Repeat blood tests will be required 2-3 months post-operatively to assess the success of shunt closure.

What kind of outcome is expected following a PSS?

The outcome is excellent in the majority of cases. Complications can occur, esp. in the immediate post-operative period. Complications include portal hypertension which can reduce the blood supply to the intestine leading to pain, vomiting and diarrhoea. Seizures can also occur following the surgery which may require anti-seizure medication. In 20% of cases, the shunt does not fully close. This may be of no clinical significance however some cases may require a further surgery.

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