

Saddle Thrombus

Saddle thrombus is an unfortunate complication of feline heart disease. As the left atrium enlarges, the blood becomes more stagnant. As the blood becomes stagnant, small blood clots can begin to form. As the thrombus enlarges, small pieces can be broken off during contraction and lodge in different blood vessels as a clot (including the distal aortic trifurcation, the kidney vessels, the brachial/fore limb vessels and the vessels supplying the heart itself). Distal aortic embolus is the most common in cats.

The clot causes partial or complete loss of blood supply to one or both of the hind limbs. This results in nerve and muscle damage and pain. Middle-aged, male cats are reportedly at a higher risk for developing saddle thrombus.

Clinical signs of saddle thrombus reflect loss of blood supply to one or both hind limbs and usually come on suddenly/ acutely and severely. Often the most striking clinical sign is vocalization. This condition is very painful, usually causing the cats to cry excessively. Affected cats usually have no use of one or both hind limbs and may drag themselves by the fore limbs. The hind limbs are usually cool to the touch and the foot pads may be noticeably pale. Some cats show signs of respiratory distress.

On physical examination, the femoral pulses on the inside of the upper hind limbs are usually absent. A murmur or arrhythmia is usually detected, indicating the underlying heart disease. The diagnosis of saddle thrombus is based largely on the clinical signs and physical examination findings. A known history of heart disease is very supportive. Routine blood work may show elevated values consistent with skeletal muscle damage (AST, CK, lactate). Chest radiographs/x-rays often show an enlarged heart and an ECG may show an arrhythmia. An echocardiogram is necessary to definitively diagnose the type of underlying cardiomyopathy.

Treatment is mainly supportive and symptomatic. Pain management is key, but is often very difficult. Heart medications are started/adjusted appropriately. Oxygen supplementation is provided when needed. Intravenous fluid therapy, heat support and aggressive nursing care are indicated. "Clot buster drugs" are available and fall in and out of favor, but are not used on a wide scale. This is because of reperfusion injury that occurs, especially when blood flow is suddenly re-established. With reperfusion injury, free radicals and other damaging substances are released and magnify the tissue injury already caused by the thromboembolism. Generally, patients are placed on heparin therapy to prevent more clots from forming, while their body takes care of the clot that is already there and more gradually re-establishes blood flow.

A relatively long hospital stay of 1-2 weeks or more is usually the case. The prognosis for saddle thrombus is guarded. Many owners elect euthanasia due to the painfulness of this condition. Cats that make it through the initial recovery may go on to have residual hind end weakness/paresis or other residual effects. Owners must realize that a repeat episode can occur at any time because the underlying heart disease can be treated, but not cured. A repeat episode may be thromboembolism of a major organ, which carries a grave prognosis. Most patients have a recurrence within 6 months.

From an emergency standpoint, saddle thrombus is absolutely an emergency situation. These kitties seem to be in excruciating pain and if treatment is to be pursued, the sooner the better. It is important for owners to be aware of the protracted hospital stay, the possibility of long-term impairments and the chance of recurrence at any time while making the decision whether to treat or not.