Cysticercosis (Tapeworm Cysts) in Rabbits

Tapeworm cysts are a differential diagnosis for any subcutaneous mass in rabbits. These cysts can not only be unsightly but as they are space occupying masses (often within the muscle body) they can be painful and affect limb mobility.

Rabbit tapeworm cysts are an immature stage in the life cycle of the tapeworm (Taenia pisiformis and Taenia serialis) Cysts form in rabbits, usually muscles, when they ingest grass or vegetables contaminated with tapeworm eggs. This is the intermediate host stage. Contamination of the environment is by definitive hosts such as dogs and foxes, which have adult parasites living in their digestive system. The life cycle is complete when these carnivores eat animal tissue containing cysts.

Once ingested by the rabbit the eggs hatch and larvae pass through the small intestine and into the rest of the body via the liver. This can result in necrotic foci and fibrous tracts in the liver. Primary cystic sites are muscle bodies but cysts may be seen in the mesentery, brain, kidney or extraorbital space. Once at the site the larvae encyst and form fluid-filled sacs containing reproductive white scolices. These cysts can be palpated as soft swellings and may increase in size over time.

**How do we diagnose tapeworm cysts?**
Superficial cysts are easily differentiated from abscesses with a fine needle aspirate. Cystic fluid is clear and easily drained and can be considered conclusive. Specialized diagnostic tests are not currently available; however an ELIZA test is reported to be under development in China.

Rabbits with mesenteric cysts may present in shock due to rupture or inappetance due to secondary digestive complications. Cysts may be seen as opacification on radiographs or vesicles on ultrasound.

**How do we treat tapeworm cysts?**
The most effective method of treatment of cysts is surgical removal (generally the case with more common subcutaneous cysts). This is straight forward when cysts are small and causing minimal local damage. Excision and removal of the intact cyst will generally result in good healing of the muscle capsule.

Medical resolution of tapeworm cysts has been recorded using a 15 day course of Albendazole at 20mg/kg PO sid, however there are also records of recurrence of cysts following this treatment protocol and visible resolution on diagnostic imaging. Albendazole is only available as a chewable tablet in Australia, and there is no literature on the efficacy and penetration of Fenbendazole (Panacur), its closest equivalent. Though it is not thought to have good penetration of cyst capsules we do routinely treat all tapeworm cyst patients with a two week course of Fenbendazole at 20mg/kg PO sid following surgery.