



Trichinellosis

When Trichinella worms infect pigs they can produce infective meat which, if consumed by man, can cause human trichinellosis.

The Trichinella worm

The adult worm is 2-4mm long and do not live long so are not often seen. The adult worms live in the epithelium of the intestinal villi and, within five days of mating, females deposit larvae into the intestinal lamina. She does this throughout her short life of 2-3 weeks. These larvae are then distributed around the pig's body via the bloodstream. Those larvae which end up in muscles penetrate cells and remain infective for about two weeks. In this process the muscle cell converts into a nurse cell which supports the encysted larva for years. Larvae which do not end up in a muscle die and form granulomata. When the muscles are ingested the larvae excyst and rapidly develop into adults. Transmission within a herd can be by tail biting or by pigs eating dead rats or raccoons etc.

Pathology

A subclinical enteritis accompanies the initial stage. Lesions in the muscle are centred on the nurse cell cysts and are localised and walled off by collagen.

Diagnosis

Diagnosis can be made by finding cysts in the muscles and these tend to be concentrated in more active muscles such as the diaphragm. There is also an ELISA test available.

Zoonotic implications

Trichinella can infect man and so they are zoonotic. Pork products are often suspected/ implicated in human trichinellosis. Pork sausages are of particular concern as one pork carcase can become many sausages. In the USA the incidence of swine trichinellosis is 0.1-0.3% and modern husbandry methods have greatly reduced the incidence of swine trichinellosis. Cooking pork to 63°C and having a three minute rest between cooking and cutting effectively renders infected pork safe for man. Freezing fresh pork that is <15mm thick at -15°C for 20 days or -29°C for six days will kill most larvae. As a result of these various control measures the number of human cases of trichinellosis has fallen from 450 per year in 1947 to a dozen or so cases today.

Amadeite	CID Lines	Igeba	Neogen
Ayurvet	Danbred	Innovad	Norel
Aveve Biochem	Denkavit	Impextraco	Olmix
Biomin	Hydro Systems	Invivo – NSA	Rotecna
	Hypor	Meriden	Val-Co