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GENUS-STRONGYLOIDES

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Species	Host	Location
Strongyloides pappilosus	Ruminants	Small intestine
Strongyloides westeri	Horse, Donkey	Small intestine
Strongyloides stercoralis	Man, Dog, Cat	Small intestine
Strongyloides ransomi	Pigs	Small intestine
Strongyloides avium	Poultry	Small intestine and Caeca

Common name: Thread worms

MORPHOLOGY

- Slender hair like worms less than one cm long.
- Only females are parasitic in nature.
- Oesophagus is rhabditiform in free living and filariform in parasitic phase.
- Adult females are parasitic, long filariform oesophagus occupy upto 1/3 of length and uterus is intertwined with intestine giving the appearance of twisted thread.
- Parasitic forms are parthenogenetic they lay the eggs which may either give rise to another parasitic or free living generation of males and females.
- Eggs are small oval, thin shelled with both end blunt and contain fully developed embryo when laid.

LIFE CYCLE

- Lifecycle may be direct heterogonic or homogonic.
- Completely parasitic and completely free living cycles or combination the of both can occur.
- The parthenogenetic females are found deeply embedded in the mucosa of S.I and produces thin shelled transparent eggs which are passed in faeces.
- L1 may develop either directly to become L3 (infective stage) or develop to free living male and female which may subsequently produce infective larvae (Heterogonic cycle). When environmental conditions are satisfactory (temp & humidity) heterogenic cycle predominates. But when environmental conditions are unfavourable homogonic lifecycle predominates.
- In heterogonic lifecycle, L1 rapidly transformed to sexually matured free living males and females within 48 hrs. Following copulation the free living females produces egg which hatch in a few hrs and these larvae metamorphose to become infective larvae.

- ❖ In homogoenic lifecycle, L1 rapidly develop to become infective larvae [L3] within 24 hrs.
- ❖ Infection of the vertebrate host is by skin penetration and though oral infection may also occurs.
- ❖ During oral infection, larvae penetrate the mucosa of mouth or oesophagus may lead to systemic migration.
- ❖ After skin penetration the larvae reach the skin capillaries and venules then they are carried by blood to lungs.
- ❖ In the lungs they breakout into alveoli then migrate up in smaller bronchioles to bronchi, trachea and mouth finally swallowed to reach the intestine, where they mature. Prepatent period is 5 to 7 days.
- ❖ Sometimes prenatal and transmammary route of infection is also possible in sheep and cattle.

PATHOGENESIS & CLINICAL SIGNS

- Skin penetration by infective larvae may cause an erythematous reaction.
- Erosion of intestinal mucosa.
- Young animals are severely affected.
- Anorexia, loss of condition, diarrhoea and moderate anemia.
- Catarrhal enteritis.
- The larvae of *S. papillous* are associated with introduction of foot-rot due to Spherophorus necrophorus into the skin around the feet of sheep.

DIAGNOSIS

- ❖ Clinical signs
- ❖ Demonstration of eggs or L1 in faeces.

TREATMENT

Benzimidazoles are useful.

- ✓ Thiabendazole @ 50 -75 mg/ kg body weight, orally
- ✓ Fendbendazole @ 50 mg/ kg body weight, orally
- ✓ Oxyfendazole @ 15 mg/ kg body weight, orally
- ✓ Ivermectin @ 0.2 mg/ kg body weight, S/C or I/M

CONTROL

- ❖ Good hygienic management.
- ❖ Treatment of infected animals.
- ❖ Regular deworming
- ❖Treatment of the pregnant animals with anthelmintic drug during the advance stage.