EQUINE TENIASIS

1-Definition

-- Tapeworms are transmitted to horses thru pastures or bedding via intermediate hosts, which are coprophagous mites or oribatids.

-- In horses, tapeworms are found at the junction between the small intestine and the large intestine. In horses, tapeworms are found at the junction between the small intestine and the large intestine.

2-Taxonomy

Order Cyclophyllidea
Family Anoplocephalidae
Subfamily Anoplocephalinae

Persistent uterus
Simple genital apparatus
Unilateral genital pore

3 species
Anoplocephala magna
Anoplocephala perfoliata
Paranoplocephala mamillana

3-Morphological characteristics

Anoplocephala magna	***Anoplocephala perfoliata*** (the most pathogenic)	***Paranoplocephala mamillana***
--20 to 80cm/2.5cm -Very short, thick, opaque segments - The eggs measure 50 to 60µm - Voluminous scolex 3 to 6mm Located in the small intestine	--4 to 7cm/1cm -Shape of a bottle, behind each of the 4 suckers, presence of a small appendage or post-cephalic lobe -Scolex 2 to 3mm, the eggs measure from 65 to 80µm 2 appendages at the back -Adults live in the small intestine or the large intestine, often in clusters on the ileocecal valve.	--1 to 5cm/ 0.5cm Triangular scolex 700µ -Oblong suckers -Localized in the jejunum and ileum, sometimes in the stomach

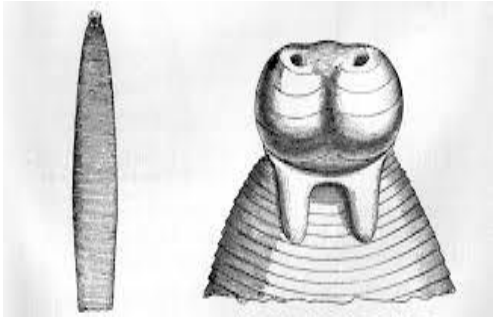

Figure: body and cephalic end of *Anoplocephala perfoliata*

4-Biology

4-1-life cycle

The cycle of Anoplocéphalidés is dicyclic, that is to say, it has two phases.

Exogenous phase

The definitive hosts expel ovigerous segments and, in some cases, directly release thick-shelled eggs, which can survive in the external environment for 1 to 2 months.

The coprophagous mites, intermediate hosts, ingest the embryonated eggs. A few months later (2 to 5 months), the egg evolves into an infective cysticercoid larva that can survive in the intermediate host until its death.

Endogenous phase

In this phase, the horse becomes contaminated by ingesting grass carrying infested mites.

The larvae then develop into adults in about 2 months and attach themselves to the small intestine, on either side of the ileocecal valve for *Anoplocephala perfoliata*.

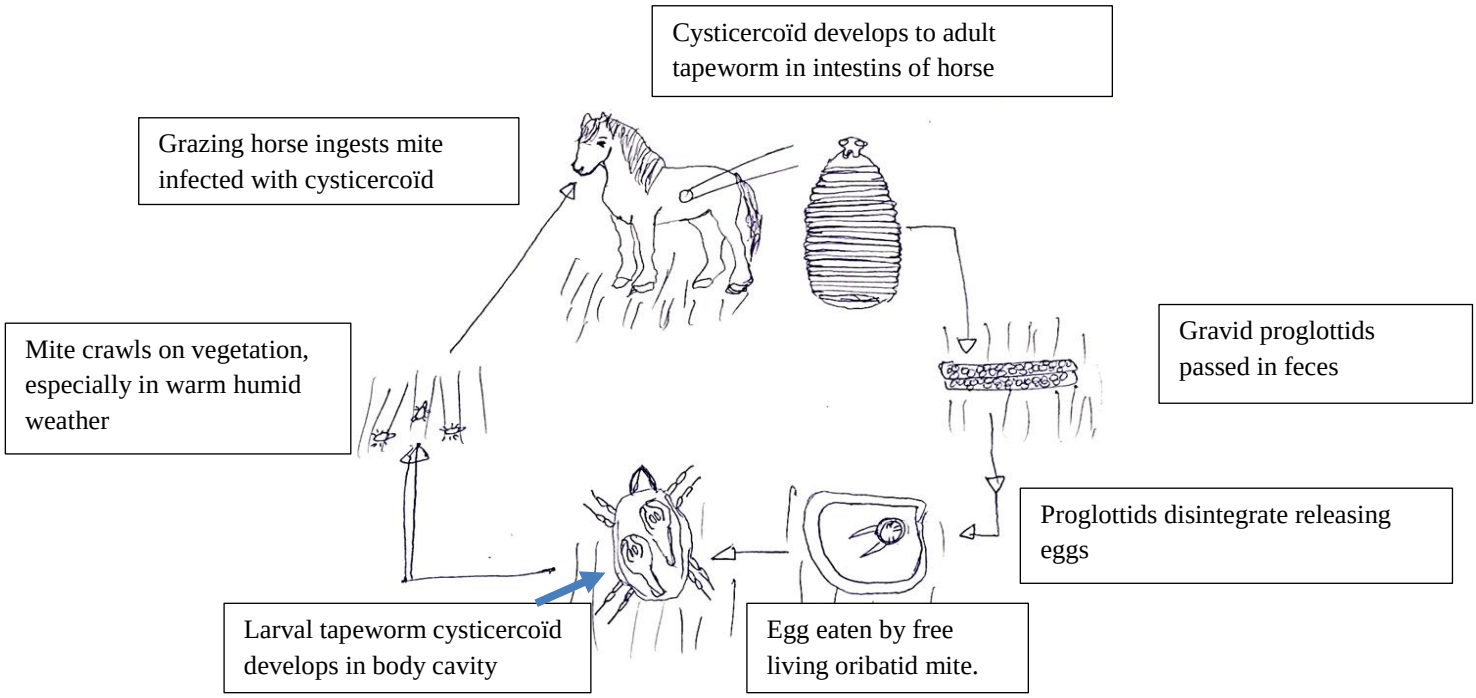

Figure: life cycle of *Anoplocephala perfoliata*

5-Pathogenesis

A. perfoliata accumulates in large numbers at the ileocecal valve where the worms' suckers cause lesions: local necrosis, false membranes, inflammation, thickening of the wall, which would be responsible for bouts of colic.

6-Symptoms

-Often asymptomatic disease, otherwise,

--Growth retardation

-And in cases of massive infestations: the horse loses weight, presents anemia, dull colic, an alternation of severe ileocecal colic and constipation

-Complications can be exceptionally severe in horses infested with *A. perfoliata*, leading to death by obstruction or after peritonitis following mucosal perforation.

Lesions

-Chronic enteritis lesions -Hemorrhagic spots

-In severe cases following infestation by *A. perfoliata*, ulcerations and micro-abscesses are observed (due to the attachment points of the parasites)

7-Diagnostic

7-1- Ante mortem diagnosis

- Egg search by flotation: The eggs are dense and are eliminated inconsistently, the technique is not very sensitive (multiple examinations are often necessary)

-Easy observation of worms during autopsy -Serological method under development

7-2-Post-mortem diagnosis: presence of worms in the small intestine or on the ileocecal valve or even in the cecum for *A. perfoliata*

8-Treatment

Pyrantel (Horseminth Pfizer) at 20 mg/kg (twice the base dose)

Praziquantel (Droncit 9% oral gel)

Praziquantel (1.5 mg/kg) + Ivermectin

9-Prophylaxis

9-1-action on animals

-It is necessary to block successive re-infestations so that adult horses and foals are not at risk of becoming infested, -It is necessary to perform coproscopic examinations to highlight the parasites and thus establish regular treatments (1 to 2 per year) using a taenicide.

The ideal is to be able to intervene in June and September. The foals will be treated 6 weeks after their release into the pasture.

9-2-action in the environment

-It would be illusory and even harmful to try to eliminate the population of infested Oribates.

-On the other hand, we can reduce the risk of pasture infestation by isolating the horses that have just been dewormed from their tapeworms in the stable for a few days and by burning their feces. Thus, the eggs released after treatment will not be able to contaminate the pastures again.