**PARASITOLOGY**

**GENERAL CHARACTERISTICS ROUND WARMS OR NEMATODE**

They are cylindrical

Threadlike

Their bodies are covered by a tough cuticles called integuments

They are dioeciously

They posses rudimentary nervous and excretory system

They have a clear liquid or fluid filled cavity which is like blood

Posterior end of the males is curved

**GENERAL LIFE CYCLE**

The life cycle includes three stages

The egg

The larvae

The adult

They are two types of larvae, 1. Rhabcliform larva 2. Filariform larva

**MODES OF INFECTION**

Generally the round worms infect someone when ingested i.e ascaris lumbricoids, trichuri, trichiura

Some round worms could be transmitted through inhalation i. enterobius varnicularis

Through the active skin penetration , by the filariform larva, ancylostoma duodenale, necator americanus, strongyloides stercoralis

Ingestion of the larva of the parasite

The bite of the blood sucking arthropod, filarial warm

**CLASSIFICATION OF FEMALE NEMATODES**

A.REPRODUCTION

B.UTERUS OF FEMALE NEMATODES

**A.REPRODUCTION**

The female nematodes can be classified depending with the legs laid out a) oviparous b) ovo- viviparous – eggs hatch immediatelyc)laviparous- they give birth to the larva,

**B.UTERUS OF FEMALE NEMATODES**

1. prodelphic uterus- the uterus is not branched,

2. opistodelphic uterus – the uterus is branched, with the vaginal opening at the anterior portion

3. Amphidelphic– is a branched uterus in the vaginal opening midway of the female warm

**ORDER ASCARDIDA**

**GENUS = ASCARIS**

**TOXOCARA**

 Canis and catis

ASCARIS LUMBRICOIDS (GIANT INTESTINAL ROUND WARMS)

CONDITION- ascariasis

Habitat- human intestine

Distribution- worldwide, cosmopolitan

Morphology – adult are elongated , cylindrical and the posterior end are curved

The male measures 12 to 31 cm

In female it is 20 to 35 cm

n/b the average output of egg, female lay more eggs than male.(200,ooo) per day

**LIFE CYCLE**

The female lays egg which are deposited, and voided out in feaces, under a suitable environmental condition, the one cell stage egg, develops into 2 cell stage and develop further into 4 cell stage 8 and 16, until the egg reaches the advanced cleavage stage

The embryonated stage is the infective stage,

In any vegetable, when man ingests the rhabdiform larva, the digestive juice erode the rhabidform larva and larva is freed, it penetrate the wall of the intestine and enters the circulation. It the moves into the heart and then to the lungs.

L2. The rhabdifrom larva---.> intestine🡪 into the circulation🡪 heart🡪lungs🡪L2🡪L3🡪L4🡪Breaks the alveolus and enters into the bronchi🡪trachea🡪pharynx🡪swallowed🡪intestines🡪L4🡪L5🡪ADULTS

**CLINICAL MANIFETSATION DUE TO LARVA**

It can be divided into two due to migrating larva, it may trigger hypersensitivity characterized by fever, urticaria, high circulating lymphocytes, eosinophils

When the larva is in large number when reach in lungs may cause pneumonia or pneumoniatis, and this pneumonia is characterized by fever, dry spurting cough and blood stain sputum, coursing a condition known us loefflers syndromes,

Larva in greater number may course liver abscess , some larva may stray and enter other parts of the body, i.e the brain, spinal cord, i.e menengitist

**CLINICAL MANIFETSATION DUE TO ADULT WARM**

In heavy infection, we have abdominal pain, acute colicky pain, epigastric region

Complication, kwarshiakor,

Competition for vitamin A , deficiency leads to night blindness

In lare number they intertwine to form a volvulus causing blockage

They can reach to billiary ducts, leading to jaundice

They may also migrate to the appendix and course appendicitis.

Some of this adults may migrate upwards and come out through the ears, nose, or through the trachea causing asphyxia

**CONTROL METHODES**

Regular deworm

Sanitary disposal of feaces

Cleaning of hands

Proper cooking or washing of the vegetable before cooking

**TOXOCARA CANIS**

This is a roundworm of dogs, geographical distribution worldwide, morphology male measures 4-6 cm.

**Modes of infection**

By ingesting fully embryonated eggs in food.

From congenital transmission through the placenta

They may infect themselves by leaking puppies

**MEDICAL IMPORTANCE**

Causes visceral larva migrants (larval granulomatosis)

LIFE CYCLE

Similar to the life cycle of ascaris lumbricoids

**TOXOCAR CATIS**

**Males are 6 cm, female 10 t0 12 cm**

**MEDICAL IMPORTANCE**

Similar to the ascaris

**VISCERAL LARVAE MIGRANS**

It can be define as the invention of the human visceral organs, by the larva of abnormal human, i.e ascaris nematodes

Man acquires the infection through ingestion

When they reach the intestine it enters the circulation and to the others organ, where by they first organ is the liver.

On arrival they damage the organ and form the tunnels, this one is called granulomatosis

N/B the larva can remain around for 4 years, liver enlargement

Eosinophilias, causes granuloma in the retina, leading to loss of vision or permanent blindness

**CLINICAL MANIFESTATION**

Based on clinical symptoms

Larva may be recovered from liver biopsies,

Refer the patient to serological testing

REATMENT

1. DIETHYLCARBAMAZINE
2. THIABENDAZOLE

CONTROL METHOD

Frequent deworming

Washing hands before eating

Washing vegetables before eating

Children should be discouraged not to play aroid areas where dogs defecates

 ASCARIS SUUM

They are found in pig, it infects man, and it is able to complete the life cycle in man, and commonly in pig handlers

When it develops in man, it will also cause loefflers syndrome,