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**Question No:1**

Write short summery on all tissue nematodes?

* **Tissue Nematodes:**

1. Wuchereria bancrofti
2. Onchocerca volvulus
3. **Wuchereria Bancrofti:**

* **Disease:**
* Wuchereria bancrofti causes filariasis
* Elephantiasis is a striking feature of this disease.
* **Properties:**
* Humans are infected when the female mosquito (especially Anopheles and Culex species) deposits infective larvae on the skin while biting.
* The larvae penetrate the skin, enter a lymph node, and, after 1 year, mature to adults that produce microfilariae.
* These circulate in the blood, chiefly at night, and are ingested by biting mosquitoes.
* Within the mosquito, the microfilariae produce infective larvae that are transferred with the next bite.
* Humans are the only definitive hosts.
* **Pathogenesis:**
* Adult worms in the lymph nodes cause inflammation that eventually obstructs the lymphatic vessels, causing edema. Massive edema of the legs is called elephantiasis.
* **Symptoms:**
* Early infections are asymptomatic. Later it develops;
* Fever
* Lymphangitis
* cellulitis
* Gradually, the obstruction leads to edema and fibrosis of the legs and genitalia, especially the scrotum
* Elephantiasis occurs mainly in patients who have been repeatedly infected over a long period
* Tropical pulmonary eosinophilia is characterized by;
* Night coughing
* Wheezing specially at night.
* **Diagnosis:**
* Thick blood smears taken from the patient at night reveal the microfilariae.

**2. Onchocerca volvulus:**

* **Disease:**

**Onchocerciasis** , is also known as **river blindness**.

* + - Humans are infected when the female blackfly, Simulium, deposits infective larvae while biting.
    - The larvae enter the wound and migrate into the subcutaneous tissue, where they differentiate into adults, usually within dermal nodules.
    - The female produces microfilariae that are ingested when another blackfly bites.
    - The microfilariae develop into infective larvae in the blackfly to complete the cycle.
    - Humans are the only definitive hosts.
* Inflammation occurs in subcutaneous tissue, and pruritic papules and nodules form in response to the adult worm proteins.
* Microfilariae migrate through subcutaneous tissue, ultimately concentrating in the eyes.
* There they cause lesions that can lead to blindness.

* **Symptoms:**

In the early stages you may not have any symptoms. When the infection become severe the patient have the following symptoms:

* Bumps under the skin
* Loss of vision
* Skin rashes
* Enlarged groin
* Light sensitivity and cataracts
* Extreme itching
* Changes to skin pigmentation
* Itching of the eyes
* Loss of skin elasticity, which can make skin appear thin and brittle
* In rare cases, you may also have swollen lymph glands.
* **Diagnosis:**
* Biopsy of the affected skin reveals microfilariae
* Examination of the blood for microfilariae is not useful because they do not circulate in the blood
* Eosinophilia is common.

The End