WUCHERERIA BANCROFTI (Filarial worm)

Phylum Nematoda

Class Phasmidia

- Wuchereria bancrofti is commonly known as 'Filarial worm'.
- It is a nematode parasite that causes Elephantiasis or Filariasis in man.
- Adult worms of Wuchereria live as internal parasites in the lymph glands and lymph vessels of man.
- Both male and female worms live intimately together in coiled condition.
- This worm is named alter Wuchercr and Bancrofti, who described the adult worms and the larval forms in the human beings.
- It is pathogenic parasite. Man is the primary host and female culex mosquitoes act as intermediate hosts.
- Wuchereria is unsegmented ovo - viviparous animal.
- The anterior end of the filarial worm is blunt and posterior end is pointed.
- Male is identified by curved tail with a pair of unequal copulatory spicules.
- Larva of Wuchereria is microfilaria. It is enclosed in a loosecuticular sheath.
- At the anterior end of the larva, a stylet is present where mouth is formed during further development.
- The larval body also contains a nerve ring, excretory pore, excretory bladder, rcnctte cell and inner cell mass representing rudimentary alimentary canal.
- During day time the micro filaria larva move in the blood vessels of heart and lungs-diurnal periodicity.
- During night time 10 P M to 4 A M the microfilaria larvae move in the peripheral blood vessels of man. This is known as nocturnal periodicity.
- The infective stage of Wuchereria to intermediate host is microfilaria. Infection is by inoculation method. Microfilaria enters the midgut of mosquito. Here the sheath of the larva is dissolved within 2-6 hrs. of infection.
- The larva penetrate the gut with the help of stylet and enters haemococl. Through blood it reaches thoracic muscles. Where they take rest and begin to grow.
- The larva first tranform into flat sausage shaped form, which is the first stage larva. Later this stage undergo moulting and grows into a slender elongated from the second stage larva.
- This second stage larva undergo another moulting to become a long infective stage teh third stage larva. These changes take place with in a period often to twenty days.
- These infective larvae reach the proboscis of the mosquito. When such a mosquito biles a man, these larvae are released into his blood vessels and finally reaches the lymph vessels.
- The larva undergo two moulfings in the lymph vessels and transform themselves into the adult forms. They attain sexual matrity in about 5-18 months time.
- Microfilaria larvae are non-pathogenic but they cause minor symptoms like filaria fever, head-ache and mental depression.
- Adult Wuchercriae causes obstruction in the flow of lymph in the lymph vessels. The obstruction causes inflammation in lymph vessels, this is known as 'lymphangitis'.
- Due to lymphangitis the legs, hands, breast and scrotum become swollen in fantastic proportion and look very ugly. This condition is called 'Elephantiasis'.

- Number of moults in the life history of wuchereria are 4
- In Pacific Islands the microfilariae arc found in the peripheral blood vessels during the day and at night in equal members and do not show periodicity