

LECTURERS IN VETERINARY PARASITOLOGY

INTRODUCTION, NEMATODA AND SYSTEMIC PLATYHELMINTHES

THIRD YEAR STAGE

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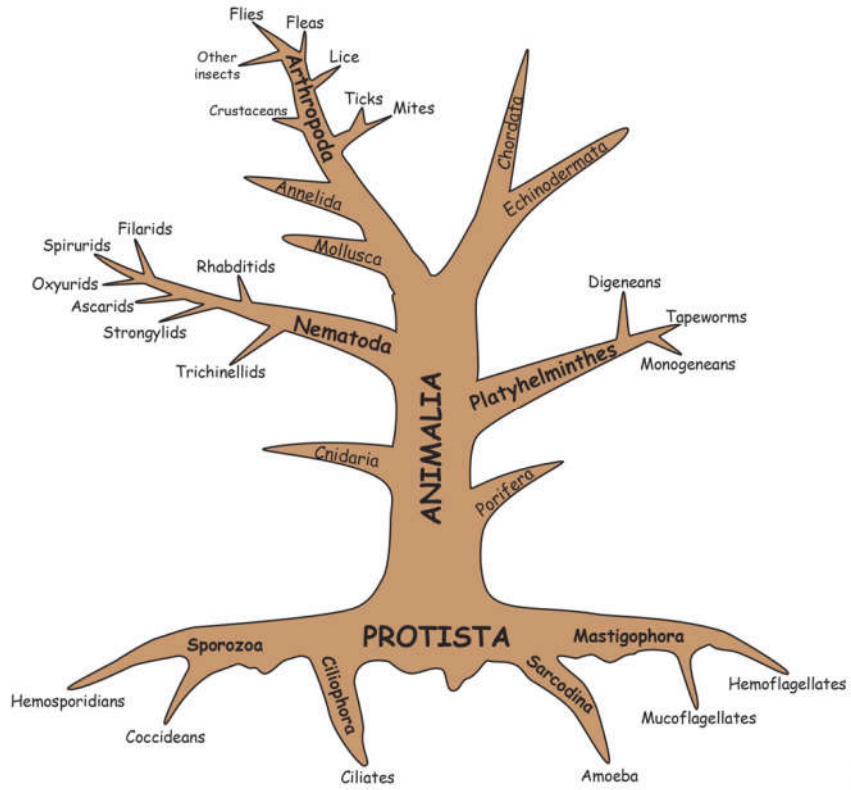
College of Veterinary Medicine

University of Basrah

CHAPTER THREE

SYSTEMATIC PLATYHELMINTHES

NC STATE UNIVERSITY



Definitive Host/ Intermediate Host

- Definitive host: Human
- Intermediate host: Snail

Biomphalaria (*S. mansoni*)

Bulinus (*S. haematobium*)

Oncomelania (*S. japonicum*)

- Reservoirs: monkeys, rodents, cats, dogs, cattle, horses, swine, wild mammals.

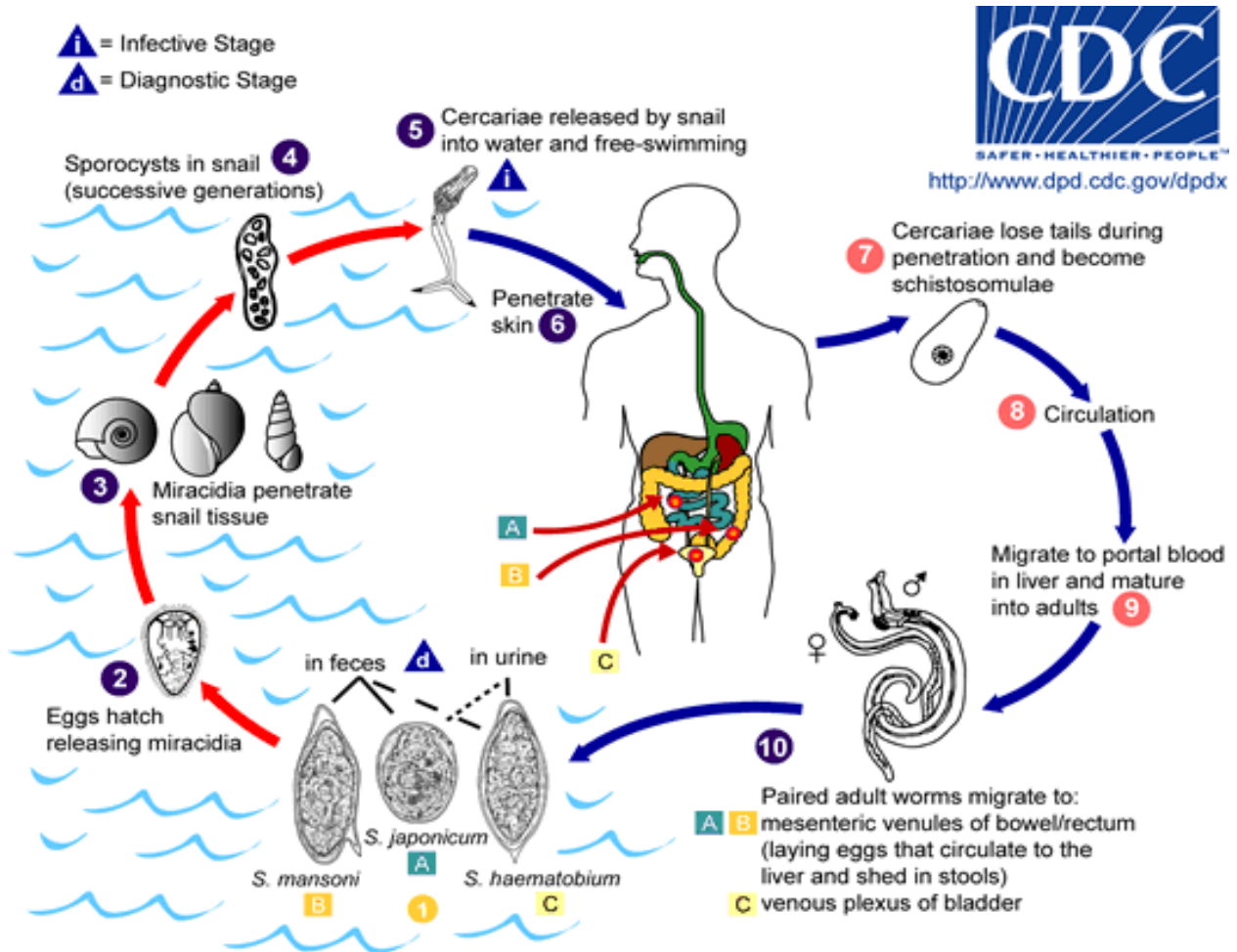


Fig. (31): Life cycle of *Schistosoma* spp.

many cause swimmer's itch, where cercaria penetrate skin, die, and cause inflammation in abnormal hosts

Pathogenesis

1-S. mansoni

- most pathogenic
- site of infection: veins of large intestine

2-S. haematobium

- bloody urine
- site of infection: veins of bladder

3-S. japonicum

- high morbidity
- site of infection: veins of small intestine

Clinical Symptoms

Migratory phase

- Symptomless

Acute phase (Katayama fever)

- Chills, fever, fatigue, headache, muscle aches, cough, abdominal pain, diarrhea, and eosinophilia.

Chronic phase

- Bloody diarrhea, enlargement of liver and spleen, ascites, bloody urine, bladder cancer, kidney problems, CNS lesions.

Control & Prevention

- Education of the public
- Sanitation of drinking water
- Diagnosis and treatment
- Management of the environment
- Control of the intermediate hosts (freshwater snails).

Diagnosis

- Microscopic identification of eggs in stool or urine (most practical)
- Tissue biopsy- rectal or bladder biopsy may demonstrate eggs when stool or urine examinations are negative.
- Antibody detection
- Morphologic comparison with other intestinal parasites

Treatment

- praziquantel -drug of choice, effective in the treatment of all forms of Schistosomiasis, with virtually no side effects
- Oxamniquine -used exclusively to treat intestinal schistosomiasis in Africa and South America
- Metrifonate - effective for the treatment of urinary schistosomiasis
- No vaccinations currently available.

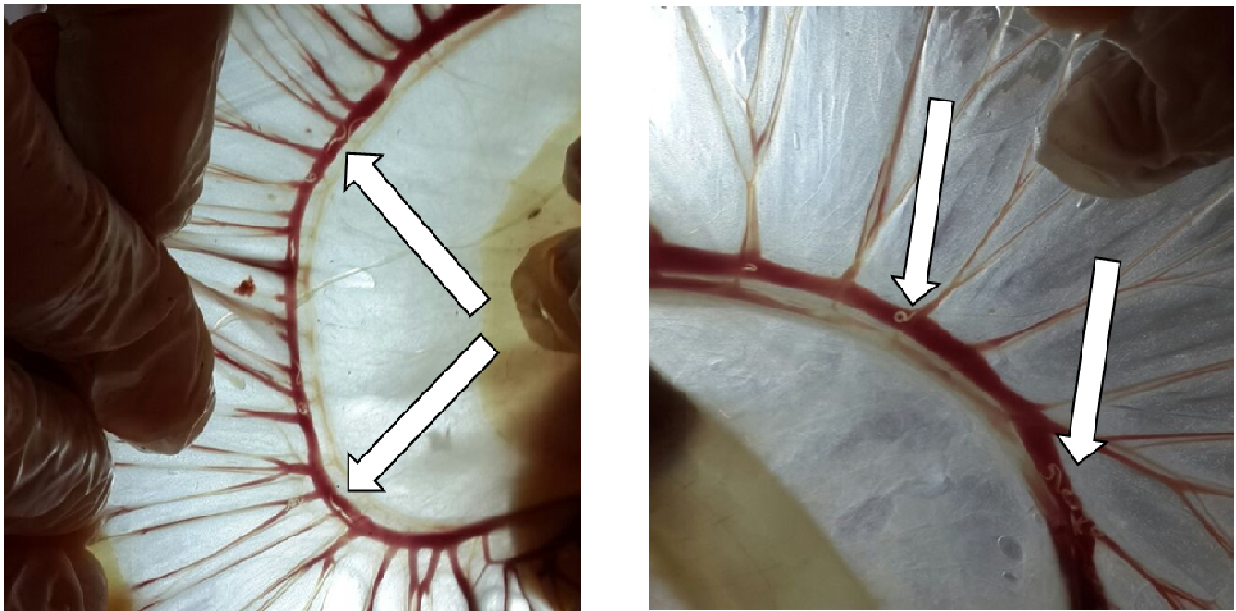


Fig. (32): The site which *Schistosoma spp.* Could be found