



كلية الرشيد الجامعة قسم تقنيات المختبرات الطبية الطفيليات الطبية

SCHISTOSOMA

المرحلة الثانية - النظري

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Class: Trematoda

Schistosoma

1. SCHISTOSOMA HAEMATOBIIUM

- ❖ definitive host : human.
- ❖ Intermediate host: *Bulinus truncates* .
- ❖ Disease : vesical schistosomiasis , urinary bilharziasis
- ❖ Habitat : venules of urinary bladder .

LIFE CYCLE

Adult worms reside in pairs: the female lying in the gynecophoral canal of the male. After fertilization, eggs (terminal spine) are passed into the venules. A larval form (the miracidium) develops within the egg.

Its lytic enzymes and the contraction of the venule rupture the wall of the venule liberating the egg into the perivascular tissues urinary bladder.

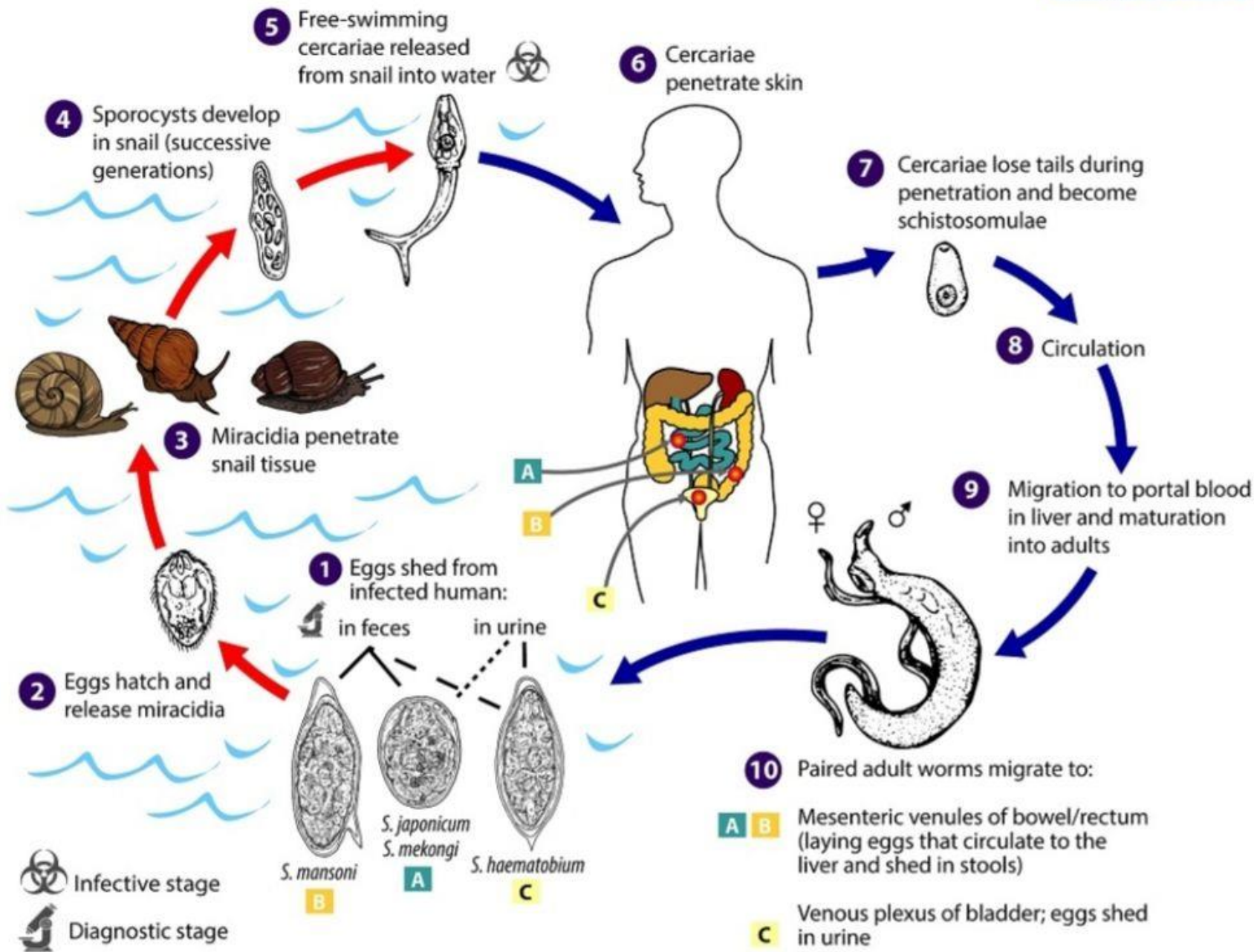
LIFE CYCLE

The eggs pass into the lumens and organs and are evacuated in the urine. On contact with fresh water the miracidia hatch from the eggs and swim about until they find the appropriate snail (*Bulinus truncates*), which they penetrate.

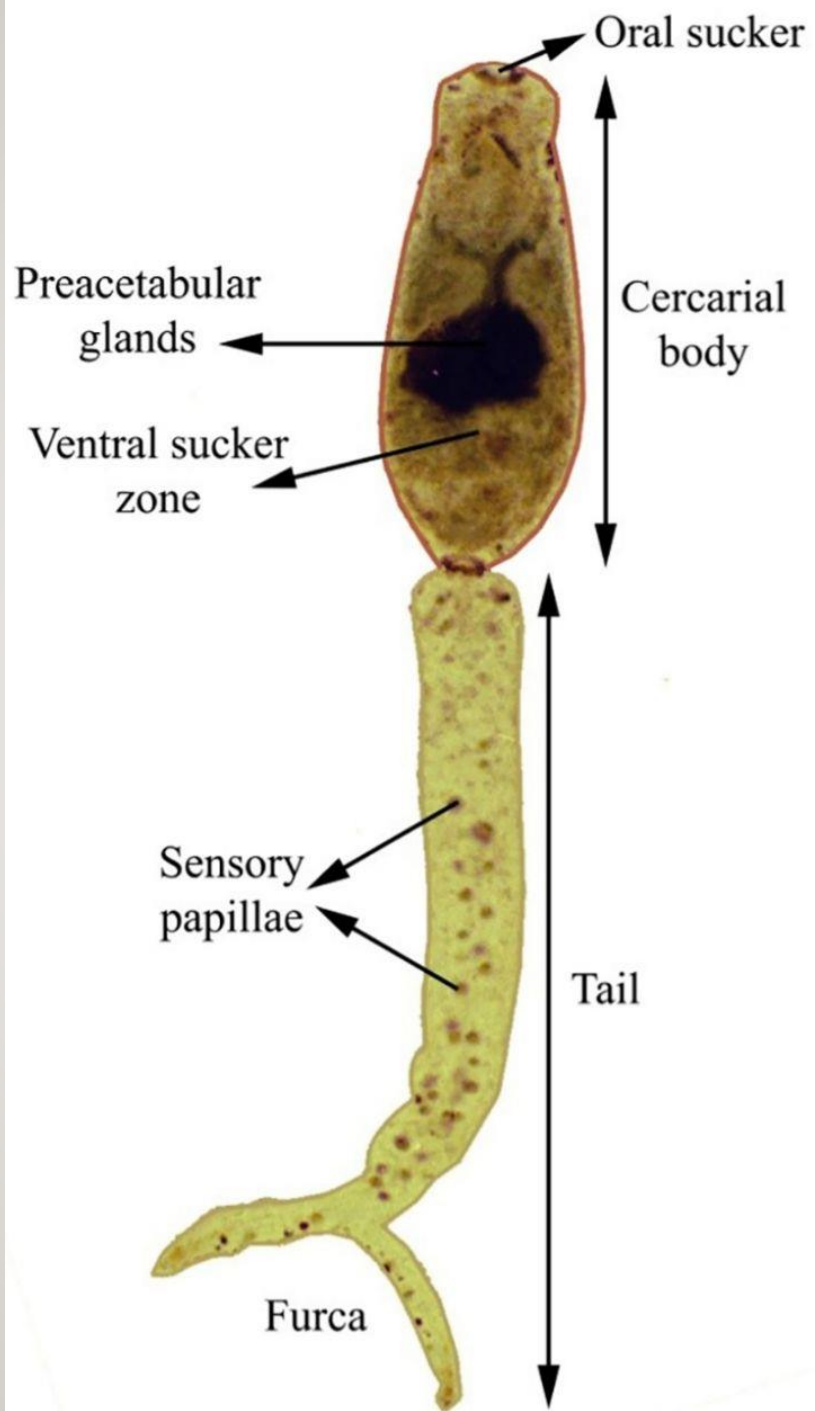
After two generations of sporocyst development and multiplication within the snail, the fork-tailed cercariae emerge.

Infection to man takes place during bathing or swimming. The cercariae penetrate the skin, are carried into the systemic circulation and pass through to the portal vessels. Within the intrahepatic portion of the portal system, the worms feed and grow to maturity.



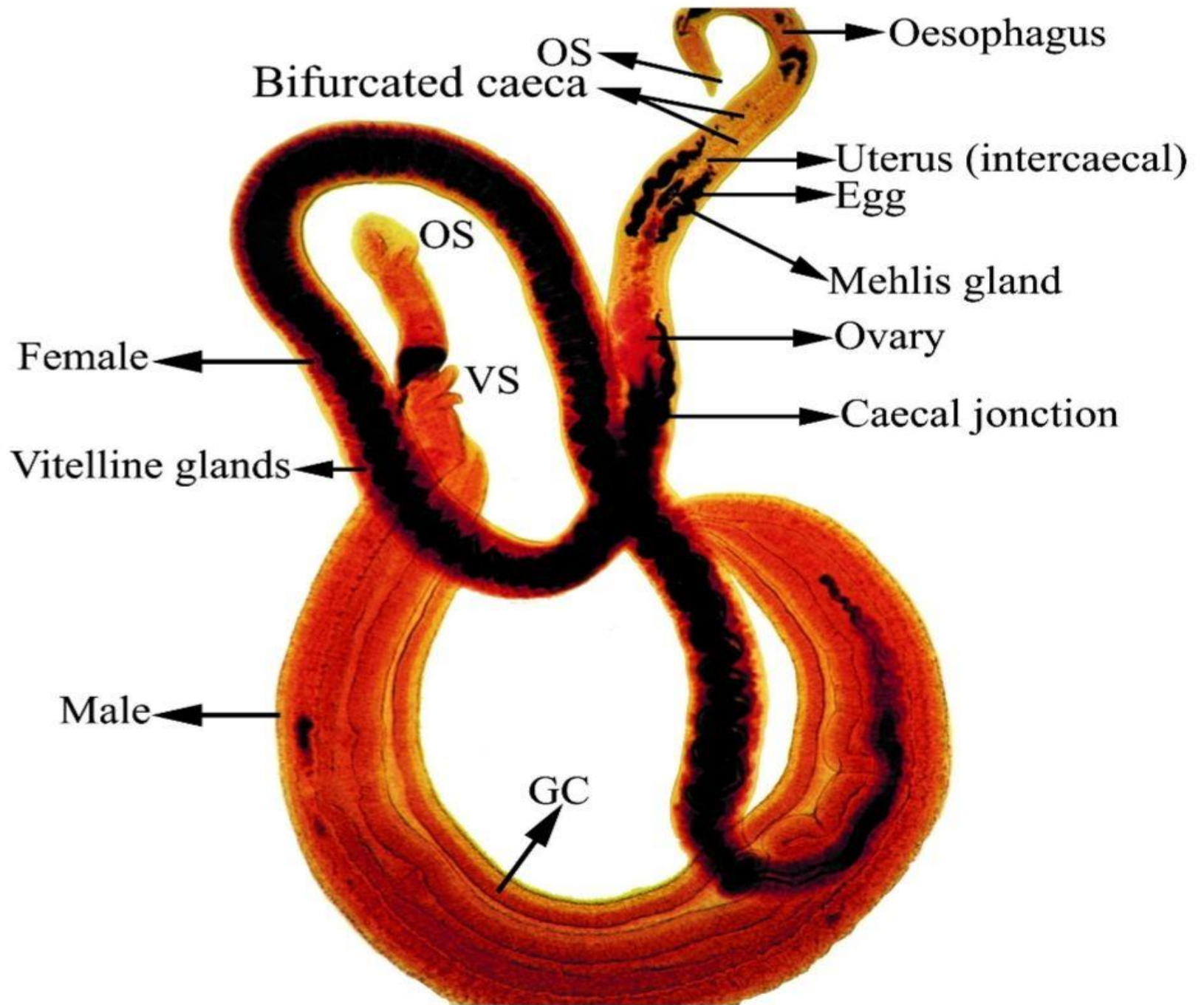






THE ADULT WORM PARTS

- A. female: are long and slender (length 1,2-2,6 cm) has oral and ventral sucker.
- B. male: are short and wide (length 0,6-2,5 cm) , is curved ventrally to form a gynecophorical canal in which the female settles for reproduction.



SYMPTOMS

1. stage of invasion (incubation period):that time between cercaria invasion and first oviposition , it takes 1-2 months , the symptoms are rash , anorexia and headache.
2. stage of egg deposition and extrusion (35 days): it is the time elapses between egg (deposition and extrusion in urine) dysuria , burning sensation , the appearance of blood at the end of urination and pain at kidneys and bladder region
3. stage of tissue proliferation and repair : fibrous nodules (pseudo tubercles) and secondary cystitis and fibrosis .

DIAGNOSIS

1. urine sedimentation to detect the eggs (terminal spine) then put them in fresh water to allow hatching for miracidium examination .
2. serological test : complement fixation , skin test .
3. cystoscope.

Class: Trematoda

Schistosoma

1. SCHISTOSOMA MANSONI

- ❖ definitive host : human.
- ❖ Intermediate host: *biomphalaria alexandrina* .
- ❖ Disease : intestinal schistosomiasis .
- ❖ Habitat : venules in large intestine .

LIFE CYCLE

Adult worms reside in pairs: the female lying in the gynecophoral canal of the male. After fertilization, eggs (lateral spine) are passed into the venules. A larval form (the miracidium) develops within the egg. Its lytic enzymes and the contraction of the venule rupture the wall of the venule liberating the egg into the perivascular tissues intestine.

The eggs pass into the lumens and organs and are evacuated in the stool On contact with fresh water the miracidia hatch from the eggs and swim about until they find the appropriate snail (biomphalaria alexandrina), which they penetrate.

LIFE CYCLE

After two generations of sporocyst development and multiplication within the snail, the fork-tailed cercariae emerge. Infection to man takes place during bathing or swimming.

The cercariae penetrate the skin, are carried into the systemic circulation and pass through to the portal vessels. Within the intrahepatic portion of the portal system, the worms feed and grow to maturity.



SYMPTOMS

fever , acute pain ,Inflammation , symptoms are associated with biliary obstruction , jaundice .

DIAGNOSIS

1. stool examination: observing eggs in stool .
2. specific antibody detection .
3. CT scan .