Fasciolopsis buski
Introduction

- One of the old parasites described in Chinese traditional medicine

- In London, *Fasciolopsis buski* was first found in the duodenum of a sailor and described by Busk in 1843. Barlow first determined its life cycle in humans in 1925

- Prevalent in Southeast Asia and lives in humans and pigs’ intestines. It is the largest intestinal fluke of humans—Asia Giant Intestinal Fluke

- The prevalence of fasciolopiasis is related to growing water plants and feeding pigs on water plants
Morphology

Adult worm

- Long elliptic, flesh-colored, looks like a slice of raw meat
- Dead worm looks like a slice of ginger
- About 20-75 × 8-20 × 1-3mm
- The funnel-like ventral sucker is near the oral sucker
- Two coral-like testes are located in the posterior half of the body
oral sucker

ventral sucker
Egg

- Oval in shape
- Slightly yellow in color
- 130-140 × 80-85µm, the largest helminth egg
- The thinner shell with an operculum encloses an ovum and 20-40 yolk cells.

**Morphology**

Small operculum

Ovum

Yolk cells
Life cycle

1. Unembryonated eggs passed in feces
2. Embryonated eggs in water
3. Miracidia hatch, penetrate snail
4. Snail
   a. Sporocysts
   b. Rediae
   c. Cercariae
   in snail tissue
5. Free-swimming cercariae
6. Metacercariae on water plant ingested by humans or pigs, causing infection
7. Excyt in duodenum
8. Adults in small intestine

\[ \text{i = Infective Stage} \]
\[ \text{d = Diagnostic Stage} \]
Site of inhabitation: small intestine

Infective stage: metacercaria

Infective mode: eating raw water plants with metacercariae

Intermediate hosts: Planorbis snail

Medium of water plants: water bamboo, water caltrop and water chestnut, etc.

Reservoir host: pig

Life span: 1-4 years
Planorbis snail

Intermediate hosts

Life cycle

cercaria
water bamboo

water caltrop
Water chestnut is commonly eaten raw in the far east and is an important source of infection of *Fasciolopsis buski*, as the cercaria encysts on their surface.
Pathology and Clinical manifestation

- Enteritis due to the attachment of the adults, manifests abdominal discomfort, nausea, vomiting and diarrhea
- Malnutrition results from the worms sharing food with the host and diarrhea
- Manifests anemia, edema of leg and face even ascites
- Maximum worm burden report >3,700 worms
Obstruction in the intestine of pig
Ascites and nanoid
Diagnosis

**Stool examination:**

1. Direct fecal smear
2. Water sedimentation method
Epidemiology

- The disease is prevalent in Southeast Asia. In China it is found in 18 provinces, city and autonomic region except north and west regions

- The prevalence of fasciolopiasis is related to growing water plants and feeding pigs on water plants
Life style correlated with *F. buski* infection
Treatment and Prevention

- The treatment of the patients, carriers and pigs
  - Praziquantel

- Prevention
  - Health education
  - Management of human feces
  - Avoid feeding pigs on raw water plants