

SEMEY STATE MEDICAL UNIVERSITY

Department of surgery

SIW

Discipline: General surgery

Theme: «Basics of parasitic diseases in surgery»

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# Plan

- Ascariasis
- Echinococcosis
- Alveococcosis
- Opisthorchiasis
- Amoebiasis
- Filariasis
- Paragonimoz
- Fascioliasis

scheme of parasite development,  
principles of diagnosis and treatment

# Ascariasis

## Etiology

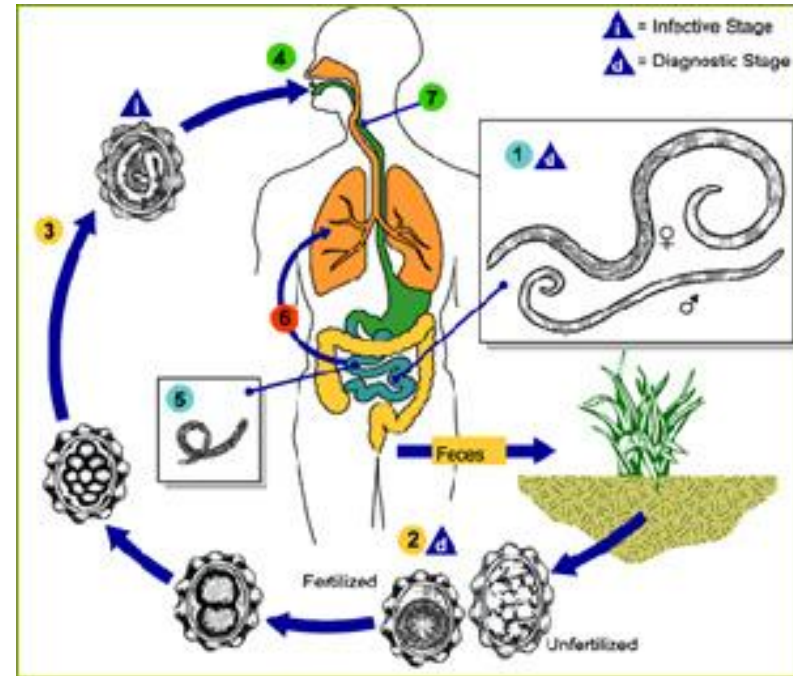
The cause of human infection is the use of fecal-contaminated vegetables or water containing eggs in the developing stage of larvae.

## Pathogenesis

1. Larvae of worms penetrate the intestinal wall into the mesenteric vessels
2. With the flow of blood through the portal vein enter the liver and lower Vena cava
3. Reach the right half of the heart and enter the small circle of blood circulation
4. Pass through the pulmonary capillaries
5. Penetrate the alveoli, trachea and bronchi
6. Rise in the throat and mouth
7. With saliva when swallowing again descend into the small intestine

# Ascariasis clinic

- intoxication of the body
- nausea salivation
- loss of appetite
- occasional abdominal pain
- dizziness
- hypererethism
- epileptic seizures
- in the blood anemia and eosinophilia



# Conservative treatment

- Mintezol 50 mg/kg 2-3 time/day during 5-7 days
- Vermox 100 mg 2 time/day during 4 days

## Complications

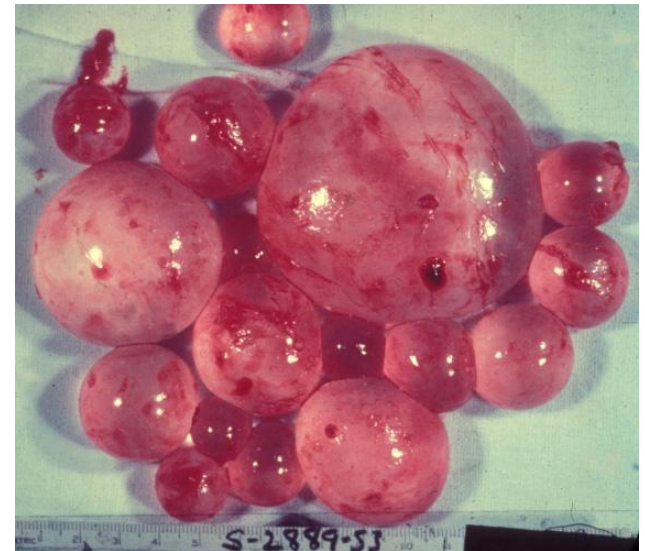
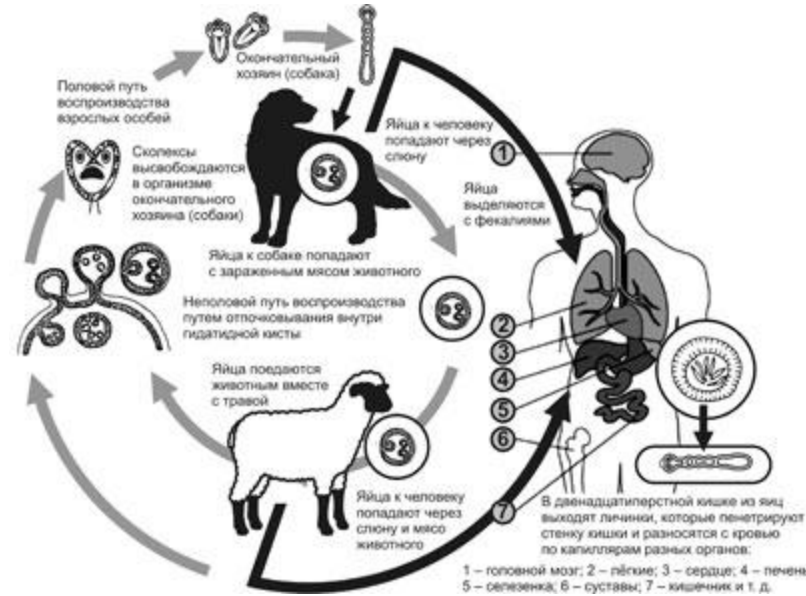
- Peritonitis
- inflammation of biliary tract
- acute appendicitis
- intestinal obstruction

## Treatment

In cases of surgical complications, surgical treatment is necessary. When obturation of the small intestine during surgery, a lump of worms is recommended to be squeezed into the colon, removal of worms through the lumen of the intestine threatens with subsequent complications

# Echinococcosis

**Echinococcosis** (hydatid, vesicular, single — chamber) is a relatively widespread disease of humans and animals around the globe, caused by parasitism in the tissues of their internal organs of the larval stage of *Echinococcus granulosus* for which man and some mammals (sheep, pigs, horses, camels, cattle, etc.) are intermediate hosts.



# Clinical manifestations

## *Stages*

### 1) No symptoms

### 2) Manifestations

- allergic rash
- complaints of feeling of heaviness,
- pressure in hypochondrium and epigastric pain,
- appetite disorders,
- the emergence of aching pain in the abdomen,
- the increase in size of the liver,
- the appearance of a rounded tumor-like formation of different consistency.

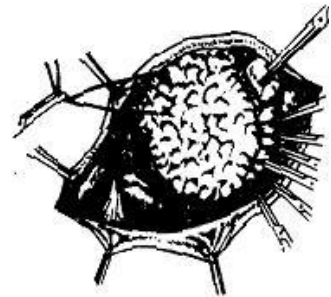
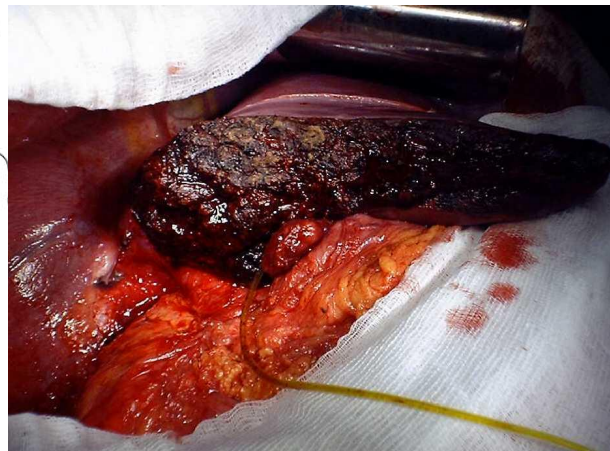
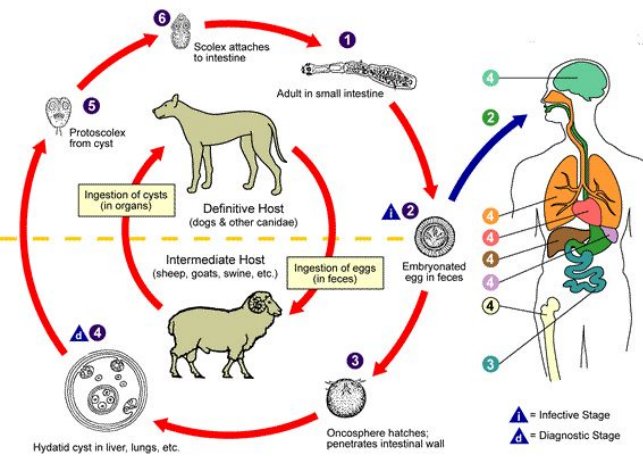
### Complications

- suppuration of the cyst,
- cyst rupture,
- a break through in the bronchus,
- the development of ascites,
- obstructive jaundice.



# Alveococcosis

**Alveococcosis** (alveolar echinococcosis, multi-chamber) - more rare than bubble echinococcosis helminthiasis, characterized by pronounced natural foci, predominant defeat liver and more malignant course due to the tendency of alveolar cyst to germinate in adjacent and metastasized to distant organs





The larva of the helminth has the form of a node consisting of a set of cells-bubbles containing a yellowish liquid or gelatinous mass and scolexes.

## **The pathogenesis of alveococcosis**

### **•develops in the liver**

Due to the budding of the components of the parasitic node of small bubbles, its infiltrative growth occurs, giving the alveococcosis a resemblance to the tumor. ability to metastasize:(budding nodules are introduced into the blood vessels and, coming off, transferred by blood flow to other organs (most often — the lungs and brain)).As the center of the node grows, it is often subjected to decay with the formation of cavities that can be caught up or in which sometimes hemorrhage occurs. When the node is localized near the liver gate, subhepatic jaundice develops, and later — biliary cirrhosis of the liver. Often alveococcus sprouts in the right kidney, adrenal gland, diaphragm and right lung (with the formation of hepatic-bronchial fistula).

# Clinic

- Risk groups: 25-30 years old persons
- No symptoms in start period

# Symptoms

- the appearance of abdominal discomfort
- moderate pain
- a painless tumor-like formation
- symptom Lyubimov (detection of palpation of stony density in the liver)
- allergic symptoms (itching, hives)
- eosinophilia in 60-70% of patients

# Complications

- pronounced jaundice,
- ascites,
- splenomegaly,
- biochemical signs of liver failure

# Diagnostics

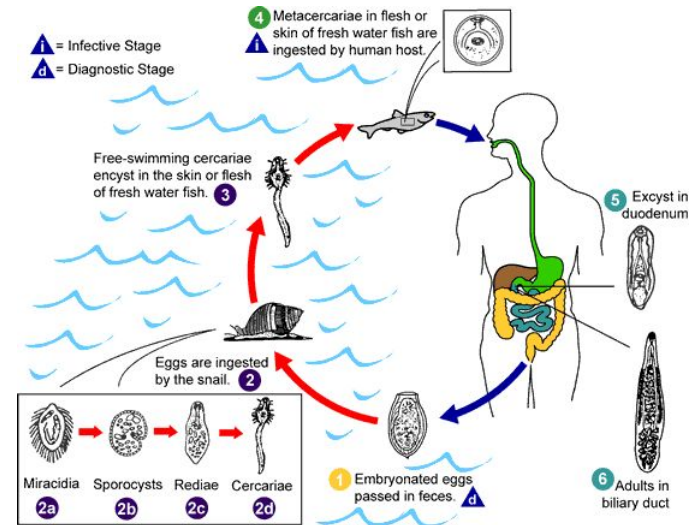
- determination of alpha-fetoprotein

# Treatment

- radical surgery
- palliative surgery (bile, resection)
- the use of thiotepa, sarcolysin, fluorouracil

# Opisthorchiasis

- Symptoms of chronic hepatitis: pain in the right hypochondrium, liver enlargement, jaundice
- Symptoms of chronic cholangitis and liver abscess: hyperthermia, ascites, jaundice, ultrasound-cavity formation
- Symptoms of chronic pancreatitis: pain of a shingling nature, weight loss, diabetes



# Conservative treatment

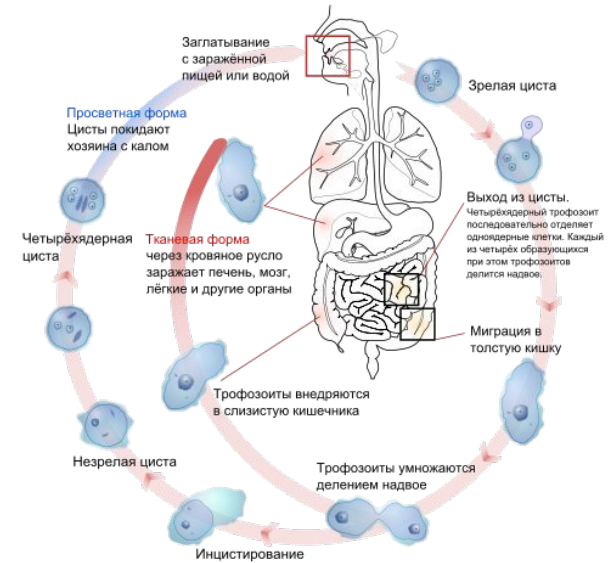


# Surgical treatment

- Puncture and drainage of abscesses of the liver and biliary ducts under ultrasound control
- Resection of the affected liver segments
- Pre- and postoperative treatment hloksilom

# Amoebiasis clinic

- Intestinal amoebiasis: fever, weakness, malaise, frequent stool with mucus, blood, in the amoeba feces
- Perforation and gangrene of the intestine
- Amoebic granuloma
- Perifocal infiltrate in the gut wall
- Intestinal bleeding
- Liver abscess
- Lung abscess
- Brain abscess



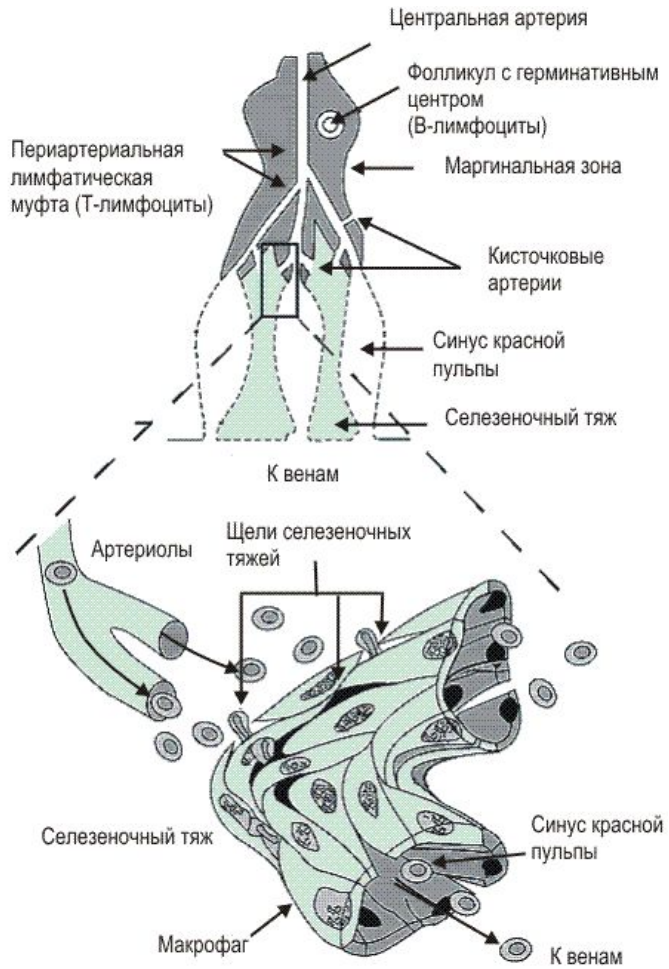


## Surgical treatment

- Resection of the affected area of the colon
- Opening and drainage of liver, lungs, brain abscesses
- With gangrene of the gut – removal colostomy



# Filariasis



# Clinical manifestations

- I. stage of lymphadenitis, lymphangitis
- II. varicose expansion of lymphatic vessels with the development of lymphostasis
- III. the development of elephantiasis



## Diagnostics

- detection microfilaria in the blood

## **Conservative treatment of filariasis**

ditrazin citrate (banozic, hetrazan) to 0.1 g  
3 times a day for 10 days

## **Surgical treatment**

excision of the affected soft tissues with  
skin plasty

# Paragonimoz clinic

- **Abdominal pain syndrome:** enteritis, hepatitis
- **Thoracic pain syndrome:** acute bronchitis, bronchopneumonia, hemorrhagic pleurisy
- **Brain damage syndrome:** headache, epilepsy, loss of consciousness, meningitis, meningoencephalitis



# Diagnostic

- In laparoscopy - fibrinous purulent effusion
- Fluoroscopy of the lungs – diffuse small and large-focal dimmable
- When imaging the brain - lesions of different diameters
- In blood tests - eosinophilia, anemia, positive intradermal test with a special antigen

## **Conservative treatment**

betinol 2 g 3 times a day during 10 days

## **Surgical treatment**

resection of the affected lung segment,  
intestinal resection, removal of brain  
cysts

# Prevention

- Observe basic personal hygiene measures
- It is good to wash your hands before eating, as well as fruits, vegetables, berries and herbs.
- In food use only well-roasted and cooked meat and fish and other products.
- Modern, regular and at the same time to carry out anti-parasitic prevention to all family members and Pets.



# Conclusion

- According to WHO, every year infectious and parasitic diseases take 15 – 16 million lives, most of which are children.
- 95% of people suffer from parasites. Live parasites in any part of the body.
- A person can be a carrier of more than 20 species of parasites at the same time from microscopic to worms several meters long.
- It's necessary to observe precautions for prevention

# Literature

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