MEDICAL UNIVERSITY - PLEVEN
Faculy of Medicine

DISTANCE LEARNING CENTRE

DEPARTMENT OF INFECTIOUS DISEASES, EPIDEMIOLOGY, PARASITOLOGY AND TROPICAL MEDICINE

PRACTICAL EXERCISES – THESES № 5

SCHISTOSOMIASIS

FOR E- LEARNING IN TROPICAL MEDICINE

ENGLISH MEDIUM COURSE OF TRAINING

SPECIALTY OF MEDICINE

ACADEMIC DEGREE: MASTER

PROFESSIONAL QUALIFICATION: DOCTOR OF MEDICINE

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1. **Object of the practical class**: Introduction to Schistosomiasis - etiology, life cycle, pathogenesis, clinical symtoms, diagnostics, treatment and prevention.

2. **Short theory**

2.1. **Etiology**, morphological forms and life cycle of Schistosomiasis – Stages, **clinical** forms and complications of the filarial parasitic diseases.
Schistosomiasis (Bilharzia), is a disease caused by parasitic worms. Most human infections are caused by *Schistosoma mansoni*, *S. haematobium*, or *S. japonicum*.
S. mansoni and *S. japonicum* eggs most commonly lodge in the blood vessels of the liver or intestine and can cause diarrhea, constipation, and blood in the stool. Chronic inflammation can lead to bowel wall ulceration, hyperplasia, and polyposis. Heavy infections leads to liver fibrosis and portal hypertension.
S. haematobium eggs tend to lodge in the urinary tract causing dysuria and hematuria. Chronic infections may increase the risk of bladder cancer.

2.2. **Diagnostics**

2.2.1 Careful review of travel and residence history
2.2.2 Serologic testing for antischistosomal antibody
2.2.3 Testing of stool or urine

2.3. **Treatment** - main therapeutical drugs, doses, side effects of treatment
2.3.1. Praziquantel 40 mg/kg per day orally in two divided doses for one day for 1-2 days to treat infections caused by*Schistosoma mansoni, S. haematobium, S. intercalatum*. and 60 mg/kg per day orally in three divided doses for one day to treat infection by *S. japonicum, S. mekongi*

2.4. Epidemiology and prevention – source of parasitic infection, mechanisms, distribution, prophylaxis, control and prevention.

2.4.1. Prevention
2.4.1.1. No vaccine is available.
2.4.1.2. Avoid swimming or wading in freshwater when you are in countries in which schistosomiasis occurs. Swimming in the ocean and in chlorinated swimming pools is safe.
2.4.1.3. Drink safe water
2.4.2. Control
2.4.2.1. Reducing the number of infections in people
2.4.2.2. Eliminating the snails that are required to maintain the parasite's life cycle.
2.4.2.3. Control measures can include mass drug treatment of entire communities and targeted treatment

3. **Microscopy of microscopic slides with the parasites**.