

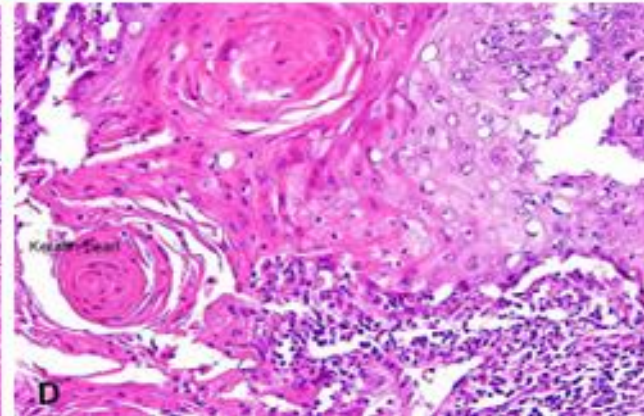
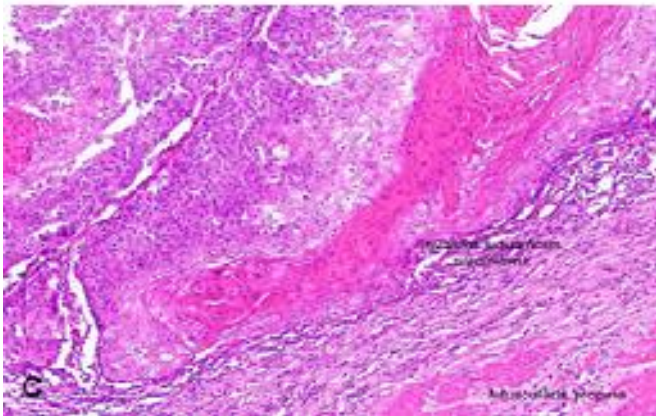
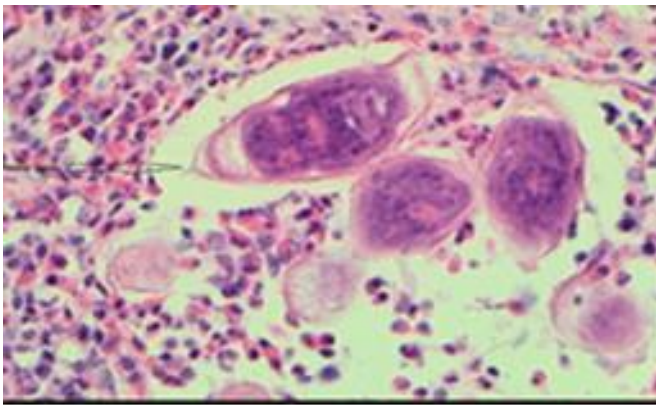
Parasitic Infections of the Renal System

➤ Parasites causing **focal renal pathology** including: hydatid disease and amoebic abscess.

➤ Parasites causing **diffuse renal pathology** including schistosomiasis, malaria, trichomoniasis, enterobiasis, urogenital myiasis, and other rare causes including: leishmaniasis, toxoplasmosis and babesiosis.

Case 1:

A 28 year old male presented in the emergency department with bleeding oesophageal varices, history of terminal haematuria was given. On physical examination hepatomegaly and splenomegaly were detected. Abdominal ultrasound revealed periportal fibrosis, portal hypertension and ascites. Laboratory tests revealed leukocytosis with marked elevation of eosinophils and anaemia. Conventional chest radiography was showed multiple pulmonary nodules. Cystoscopy examination reveal bladder mass with the following histopathological picture.



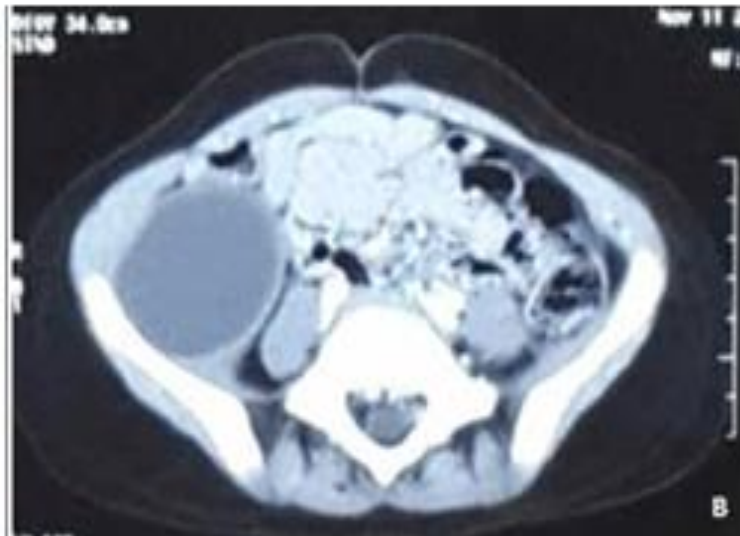
What is the possible diagnosis

bilharzial squamous cell carcinoma of the bladder

- **Mention the parasite causing of the patient's infection?**
- Schistosoma haematobium
- **How is this infection transmitted?**
- Cercariae penetrate the skin or buccal mucous membrane during contact with infected water or with drinking.
- **How to treat this patient?**
- praziquantel; which is repeated within several weeks to eradicate any schistosomes that may have survived the first course of treatment
- Urological and oncological treatment of scc

Case 2:

A 25 year old man presented to Urology clinic complaining of palpable abdominal mass, flank pain. Magnetic resonance shows a cystic space-occupying lesion, with calcification of the wall. On surgical removal of the mass, it ruptured and the patient dies immediately on table.



- What is the possible diagnosis?

Hydatid Disease

- Mention the parasite causing of the patient's infection?

Echinococcus granulosus

- How is this infection transmitted?

- ☐ Ingestion of eggs (infective stage) of Echinococcus sp. in:
Contaminated food or water.
- ☐ Contaminated hands with: - eggs especially in children
playing, fondling or kissing infected dogs or polluted soil

- Mention postmortem way to confirm your diagnosis?

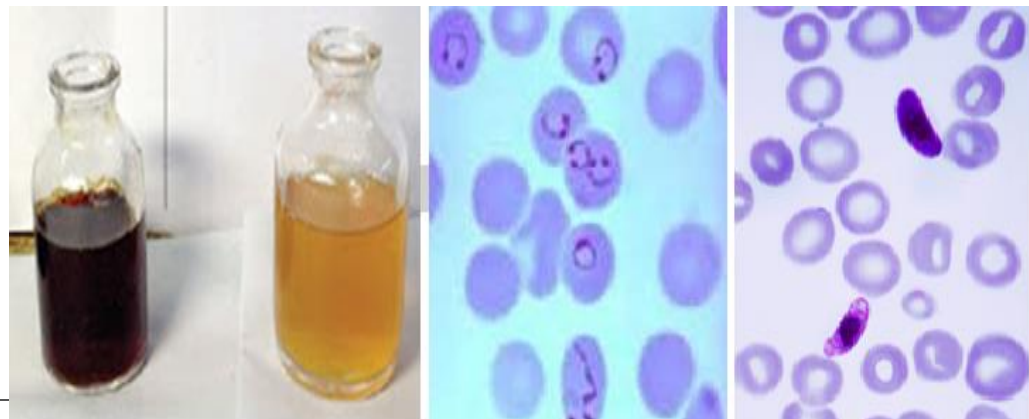
☐ Renal autopsy specimen with characteristics of hyatid cyst morphology.

- Mention the cause of the patient death ?

Anaphylactic shock and sepsis if the cyst ruptured.

Case 3:

A 28-year-old male presented to urology clinic with dark color of urine, reduced frequency of urination, severe swelling and lower limb edema, fatigue, loss of appetite, seizures and coma. On history taking from the relatives, patient had irregular attacks of shaking chills, high grade fever stage (40-41°C).



- What is the possible diagnosis

black water fever, malignant malaria

- Mention the parasite causing of the patient's infection?

Plasmodium falciparum

- How is this infection transmitted?

- ☐ Through the bite of female Anopheles mosquitoes.
- ☐ blood transfusion
- ☐ Congenital transmission.

- **How to confirm your diagnosis?**

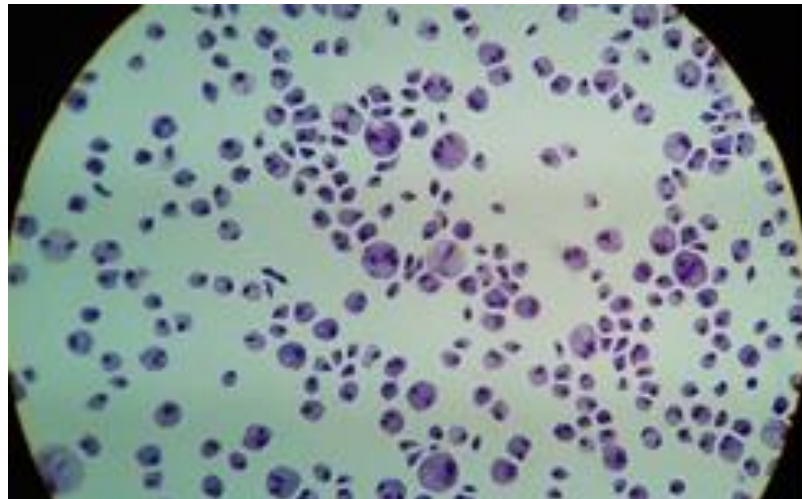
- ☐ Blood film showing erythrocytic stages
- ☐ Sternal puncture examination in case of malignant malaria when the parasite does not appear in blood films.
- ☐ Serological tests: Fluorescent antibody test and ELISA.

- **Mention the complications of this parasitic infection**

- ☐ Cerebral malaria –
- ☐ a rapid development of shock, with circulatory failure..
- ☐ Septicemia with toxemia and massive gastrointestinal hemorrhage.

Case 4:

A newly married couple presented to their Urology physician complained of dysuria, pruritus and white and fuzzy urethral discharge 2 weeks after marriage. The physician requested for examination of urine and specific urethral discharge culture. Examination of urine samples reveal flagellate parasites by wet mount technique.



- What is the possible diagnosis?

Trichomoniasis

- Mention the parasite causing of the patient's infection?

Trichomonas vaginalis

- How is this infection transmitted?
 - ☐ Sexually Transmitted Infection
 - ☐ Contaminated toilet articles and toilet seats.

- What is the culture name?

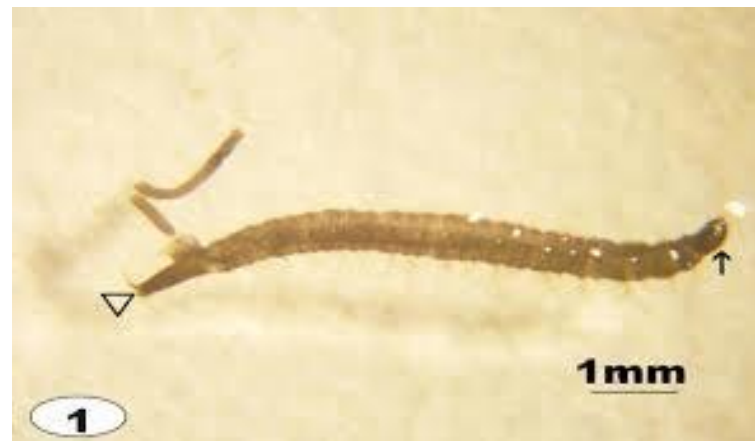
CPLM (Cysteine, Peptone, Liver, and Maltose) media

- Mention the complications of this parasitic infection?

prostatitis, epididymitis, urethral disease,
Low birth weight and infertility.

Case 5:

An 18-years-old man presented to their Urology physician complained of itching, dysuria, polyuria with intermittent passage small, motile, greyish black worms in his urine. Urine examination shows the following picture. Cystoscopy revealed normal bladder and bladder wash were also done.



- What is the possible diagnosis?

Urogenital Myiasis

- Mention the parasite causing of the patient's infection?

Eristalis tenax and Dermatobia hominis

- How is this infection occurred?

Adult flies oviposit on external offices of urinary tract, eggs hatch and larvae lives on live cells or dead tissues

- Mention the complications of this parasitic infection?

anuria and haematuria.

Case 6:

A 55-year-old farmer patient from Elnekhala, Assiut Governorate; complaining of enlargement of both his legs, fever and milky white urine. On examination hydrocele was observed. Urine analysis showed chyluria and the pictured organism below.



- What is the possible diagnosis?

Filariasis

- Mention the parasite causing of the patient's infection?

Wuchereria bancrofti

- How is this infection occurred?

It is transmitted by mosquito bite

- How to confirm your diagnosis?

microfilariae in thick blood film and serologically.

- Mention the treatment of this parasitic infection?

diethylcarbamazine (DEC)

Case 7:

A 5-year-old girl attended the pediatric clinic. Her mother reported frequency urination, dysuria. Although there was no urethral discharge, the patient complained of itching sensation in the urethra and vagina together with itching sensation around the anus especially at night.



- Mention the parasite causing of the patient's infection?

- Enterobius vermicularis

- How is this infection occurred?

Ingestion of infective larvated eggs through:

- ☐ Autoinfection (contaminated hand to mouth of the same person).
- ☐ Contaminated food or drinks
- ☐ Fly and Contaminated objects as door knobs, toilet seats or clothing

- **How to confirm your diagnosis?**

- ☐ Eggs in urine

- ☐ Adult worms may be seen in stool.

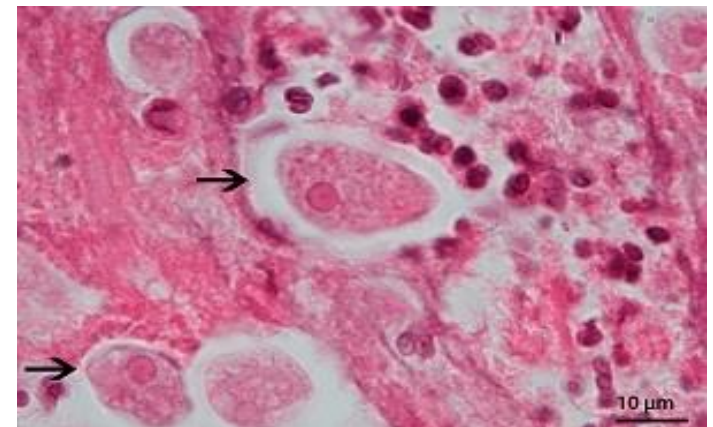
- ☐ Eggs are best obtained by swabbing the perianal region (in the early morning before bathing or defecation by:

- NIH Swab (National Institute of Health) (Cellophane Swab):

- Scotch adhesive tape swab:

Case 8:

A 78-year-old woman presented with a dragging pain on the left lion. There was no history suggestive of hematuria or urinary tract infection. There was a palpable lump in the left lumbar region. On ultrasonography a cystic mass was seen at the lower pole of the left kidney. US-guided aspiration of the cyst was done. About 10 cc thick anchovy sauce like fluid was aspirated. It was sent for direct microscopy. Motile trophozoites were seen



- What is the possible diagnosis

Amoebic Abscess

- Mention the parasite causing of the patient's infection?

Entamoeba histolytica

- How is this infection transmitted?

ingestion of the Quadrinucleated cyst
contaminating, fingers, food, flies and water.

