Helminthes

Trematodes (flukes)

\* Nematodes (roundworms)

\* Cestodes (tapeworms)

\* **Schistosomiasis (Blood Flukes)**

**\* Fascioliasis (Hepatic flukes )**

**\* Heterophes Heterophes (Intestinal Flukes**

* \* **It is a disease caused by *:***
* ***1)S.haematobium affecting urinary system***
* ***2)S.mansoni affecting intestine , liver and spleen***
* ***3) S. japonicum affecting the small intestine***
* ***1 ) Stage of invasion:***
* ***- Cercarial dermatitis (within 24 hours then resolve)***
* ***- Eosinophilic pneumonitis( Cercarial pneumonitis ): 4-6 weeks later. cough, high eosinophilia and eosinophils in the sputum***

***2) Stage of oviposition and granuloma formation :***

***Katayama syndrome (acute schistosomiasis)***

* ***1) fever : may persist for 4-6 weeks and may be investigated as a cause of pyrexia of unknown origin.***
* ***2) Arthralgia and myalgia***
* ***3) Tender hepatomegaly***
* **1**-**H*yperoesinophilia***
* ***2- serology high antibody titre of IgM type***

\****S. haematobium:***

* ***urinary bladder , seminal vesicles and prostate leading to:***
* ***- Dysuria - Terminal haematuria - Increased frequency - precipitancy***
* ***- loin pain - Haemospermia***
* ***\*Urine examination ( presence of ova)***
* ***\*Semen examination ( presence of ova ) only if vas deferens , seminal vesicales or prostate are affected .***

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* \****colon ( Mainly descending , sigmoid and rectum )***
* ***-2 months from the time of exposure to infection in the form of :***
* ***-Bouts of dysentery with tenesmus and mucus in stool.***
* ***-Prolapse of anal mucosa due to tenesmus.***
* \****Replacement of granuloma by Massive fibrosis leading to all complications***

***\*urinary system :***

* ***Stricture ureters or urethra***
* ***Ureteric stone due to stagnation + infection .***
* ***-Urinary bladder lesions :***
* ***Cystitis , Hypertrophy of the wall , Stones and cancer .***
* ***Spermatic card and epididymis : Nodularity and thickening .***
* ***\*In females : Vulva , Vagina , Uterus and tubes, ovaries may be affected however , it doesn’t cause infertility .***

* \****1 – colonic polyposis:***
* ***Covered with inflammed or ulcerated bleeding mucosa.***
* ***They are not adenomatous , So never turn malignant .***
* ***Accompanied by clubbing of fingers .***
* ***2 – Bilharzioma ; rare finding . It results from massive deposition of ova with extensive surrounding reaction leading to*** ***large mass felt in the descending colon and may be mistaken for***  ***Malignancy .***
* ***3 – Hepatosplenic Bilharziasis :***
* ***A ) Stage of hepatomegaly :***
* ***B ) Stage of hepatasplenomegaly :***
* ***C ) Stage of huge splenomegaly :***
* ***D ) Stage of hepatic encephalopathy and coma :***

\****A ) Direct Methods :***

***depend on the detcetion of ova in:***

* ***-Urine : smear , sedimentation , centrifugation .***
* ***-Stool : smear , sedimentation , concentration .***
* ***-Hatching technique :***
* ***This technique used for detection of the viability of ova in urine and stool by adding warm distilled water If viable swimming meracidia after 15 minutes .***

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