Adult guidelines for Schistosomiasis – including management of travellers exposed to schistosomiasis

History of fresh water exposure in Schistosomiasis endemic area? E.g. bathing, showering, water based activities (see WHO map above for endemic areas)

NB chlorinated water and sea exposure confer no risk of schistosomiasis exposure.

asymptomatic

symptomatic

No Symptoms – Wait 8 weeks since most recent exposure then proceed to screen for Schistosomiasis

Send 5mls of blood for schistosoma antibodies in purple or yellow top bottle to Ninewells

Negative

Positive

Reassure and discharge

Praziquantel 60mg/kg in 3 divided doses over 1 day for S.Japonicum

Praziquantel 40mg/kg in 3 divided doses over 1 day for S.Mansoni, S.Haematobium

(Round to nearest 300mg)

If uncertainty regarding infective species treat with the higher dose

Praziquantel is well tolerated. Rash and itching result from death of adult worms causing inflammatory reaction rather than side effect of medication.

*Pregnancy – see below **Lactating mothers – see below

Febrile patient with clinical picture of Schistosomiasis/known recent exposure OR symptoms consistent with chronic Schistosomiasis and known exposure

Refer to ID Team

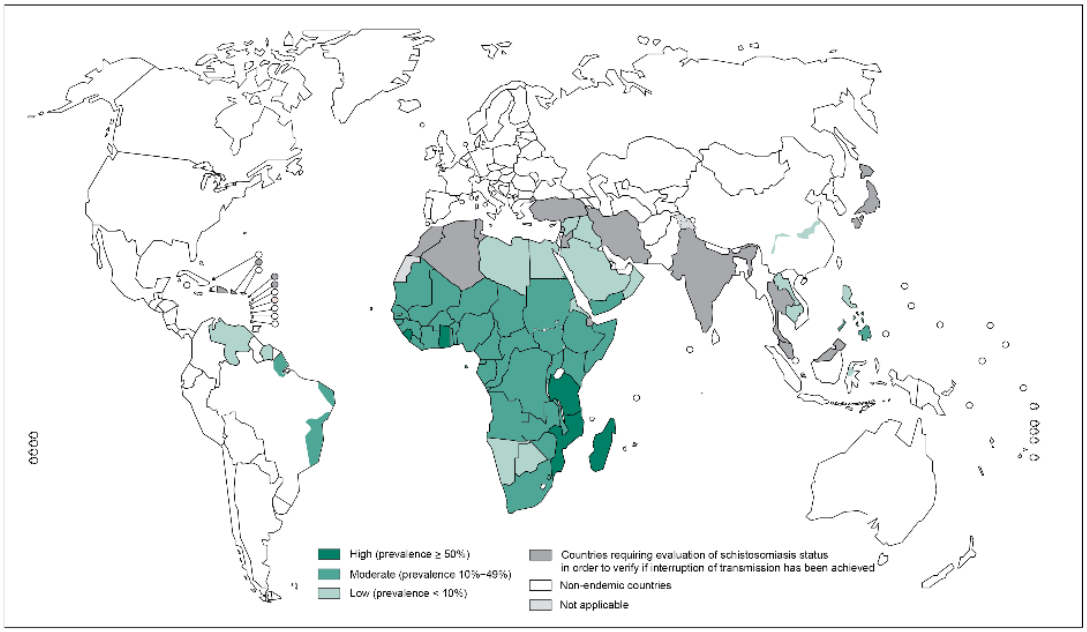
Email; tay.id@nhs.scot

(or bleep 5075 Monday-Friday 9-5pm)

*Pregnancy category B; use if benefits > risk. No adequate studies available but global evidence suggests use of Praziquantel in pregnancy is not associated with adverse birth outcomes.

**Excreted in low quantities in breast milk; likely to be safe. Can be used in clinical practice if benefits > risks.

Distribution of schistosomiasis, worldwide, 2012



Data Source: World Health Organization
Map Production: Control of Neglected Tropical Diseases (NTD)
World Health Organization

World Health Organization

Schistosomiasis – additional clinical information

Epidemiology;

Exposure to schistosomiasis requires contact with freshwater sources. Risk exposure includes swimming, washing, paddling or any activity with prolonged water exposure. Sea water and chlorinated water do not confer risk.

Background;

Schistomsomiasis (bilharzia) is a parasitic fluke infection. It requires specific type of snail as intermediate host; therefore species of schistosoma differ depending on geographical site of infection.

Transmission and life cycle;

Schistosomiasis is transmitted through penetration of cercarial larve into the skin. Cercarial larvae live in fresh water sources and are largely invisible to the naked eye.

Diagnosis;

Following infection with cercarial larvae it takes around 8 weeks for adult worms to develop. This has important diagnostic considerations as screening for schistosomiasis relies upon identification of ova or antigens to adult eggs (earlier tests will result in false negative results). Praziquantel is the mainstay of drug therapy and acts only upon adult worms.

Serological testing is only appropriate in those who have never been exposed to, or previously treated for schistosomiasis. Antigen testing is unable to differentiate between active infection and previously treated infection. Diagnosis of active infection relies upon identification of ova in urine or stool.

Considerations in treatment of symptomatic schistosomiasis infection (for use by ID physicians only);

- Ova may also be detected in stool or urine on microscopy but this requires mature adult worms to be producing eggs. Serological testing allows earlier diagnosis at an earlier stage.
- The identification of eggs in stool or urine requires significant egg excretion and can be negative in travellers with light infection.
- If treating symptomatic schistosomiasis (rather than exposure in returned travellers) and esosinophilia persists following first treatment consider repeat dosing of praziquantel after 4-6 weeks

Clinical symptoms;

Schistosomiasis causes a range of clinical symptoms. Schistosoma infections can be broadly split into those affecting the urogenital tract (S.haematobium) and those affecting the gastrointestinal/hepatic tract (S.mansoni, S.japonicum).

Disease manifestations vary from asymptomatic infection, to acute hypersensitivity reactions (mostly S.japonicum), to chronic disease associated with risk factors for development of urogenital and gastrointestinal/hepatic malignancy.

Considerations for travellers;

There is no prophylaxis for Schistosomiasis. Prevention is by avoiding exposure to fresh water. Where fresh water exposure has occurred screening tests for schistosomiasis should be performed to prevent long term sequalae.

Note that there are many myths that exist surrounding reducing risk of exposure to schistosomiasis: Towelling after swimming, exposure in deep or fast flowing water and insect repellents do not act as prevention against the transmission of schistosomiasis.

Approved by: AMG April 2020

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