SCHISTOSOMIASIS
A GUIDE FOR GENERAL PRACTITIONERS

INTRODUCTION - PATHOGENESIS

We have become aware that an increasing number of GPs are receiving requests from patients wishing to be screened for possible schistososmiasis infection. Screening asymptomatic travellers is not cost effective and should be discouraged. However, if screening is desired, we hope these guidelines may be helpful.

Typically patients will have just returned from an extended period of work or travel in Africa and have been swimming in a fresh water lake. Infection occurs through intact skin, exposed to the water.

The symptoms and signs of schistosomiasis relate to the host response to the eggs produced and disseminated by the adult female. The total egg burden depends on the adult worm burden. In endemic areas people may, over years, become heavily infected. By contrast, travellers rarely have a significant worm burden.

Most UK travellers with schistosomiasis are asymptomatic and the infection will clear with time as the adult worms die. Asymptomatic patients are at a very low risk of complications and do not require investigation or treatment. The most common symptoms are haematuria (and haematospennia) and/or diarrhoea. Very rarely eggs may find their way to the lower spinal cord and patients then present with neurological symptoms and signs.

TYPES OF SCHISTOSOMAL INECTION

Acute Schistosomal syndromes (rarely seen in the UK)

a) **Swimmers itch** - itchy rash occurring a few hours after initial exposure to schisto-infected water.

b) **Acute Schistosomiasis - Katayama fever**
This can occur with any type. The patient may present 3-12 weeks post infection, with fevers and general malaise.

Schistosoma haematobium

Endemic in much of Africa, and the Middle East (particularly rural **Egypt),** It is found mainly in the genitourinary tract. The patient typically presents with haematuria or haematospermia, This is now the commonest type in travellers returning to the UK.

Schistosoma mansoni

Also found in Africa and Middle East, as well as parts of S. America (especially Brazil), and some Caribbean islands. It can present with abdominal pain, diarrhoea, and rectal bleeding.

Schistosoma japonicum

Endemic in areas of China, Philippines, and Indonesia, but rarely isolated from returning travellers in the UK.

SCHISTOSOMIASIS - INVESTIGATIONS

Screening tests

These should only be performed for **symptomatic patients**. No single test is adequately sensitive to stand alone. Egg excretion (urine and stool) starts a minimum of 4 weeks post infection. Seeing the eggs allows speciation. Serology is **rarely positive before 6 weeks**, and is slower to become reactive in S.haematobium infections.

Available tests depending on presenting symptoms are:

1. **Terminal specimen of urine** (last ~10ml) **collected around noon**, gives highest yield. Up to 3 specimens should be tested. (Rarely positive in S.mansoni infections).

2. **Stool** Again, up to 3 samples. Any infection type may give a positive result.

3. **Full blood count** looking for eosinophilia. This is non specific, but can be helpful in deciding on the need for other investigations (see below).

4. **Serology** 10ml clotted blood. This is sent from Oxford to a reference laboratory. Turnaround time is 2-3 weeks.

   Interpretation of serology
   Results are either **negative** or **positive grade 1-9.** The reference laboratory quotes a **sensitivity** of ~85% for S.mansoni, and 70% for S.haematobium infection, with poorer sensitivity in early infection. **Specificity** is about 65% for grade 1 positive (ie 1 in 3 results will be false positive), but higher for stronger positive results.

   Positive results can persist long after effective treatment,

PRACTICE POINTS

Essential information to be given with all requests please:
Place(s) of travel
Time since last exposure
Any relevant clinical symptoms/signs
Specifically request examination for schistosomes, eg not just "MC&S" or "OCP"
Please also state if patient has previously had (positive) investigations, and treatment for schistosomiasis

SCHISTOSOSMIASIS - MANAGEMENT & REFERRAL CRITERIA

Referral to Infectious Diseases Specialist may be indicated:

- **For any patient with possible Katayama fever or severe symptoms**.The major differential diagnosis of malaria needs to be excluded, and tests for schistosomiasis are frequently negative at this early stage anyway.

- Any patient with neurological symptoms and an exposure history.

- For a patient with symptoms or unexplained eosinophilia and an appropriate travel history, but negative investigations. Further tests may include rectal biopsy, imaging etc.

- For a patient with positive investigations, if you are not familiar with treatment, or unable to supervise it.

Treatment
The treatment of choice in the UK is Praziquantel (see BNF). This drug is still only available on a named patient basis.

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