Schistosomiasis / Bilharzia

An update for registered healthcare practitioners

April 2017
Aims of resource:-

- To raise awareness of Schistosomiasis/Bilharzia infection with registered healthcare practitioners
- To provide information which allows practitioners to discuss the implications of this infection with those who are travelling to risk countries/areas
- To provide information which enables practitioners to give advice to travellers on the prevention of this infection
Learning Outcomes

Following completion of this resource registered healthcare practitioners will be able to:-

• Understand the cause of Schistosomiasis/Bilharzia infection
• Identify risk countries/areas where travellers may contract this infection
• Identify the sources of infection
Learning Outcomes (contd.)

• Describe the mode of infection and the lifecycle of Schistosomiasis/Bilharzia
• Describe the symptoms, diagnosis and treatment of Schistosomiasis/Bilharzia
• Discuss the implications for travellers and ways of avoiding infection
• Be aware of sources of further information
Schistosomiasis or Bilharzia Infection

**Schistosomiasis** is also known as **Bilharzia**
- The infection is caused by different species of parasitic worm.
  - Main Species:
    - *Schistosoma mansoni*
    - *Schistosoma haematobium*
    - *Schistosoma japonicum*
Countries or Areas affected

Schistosomiasis, countries or areas at risk, 2014

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization
International Travel and Health

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Schistosomiasis

- Is the most commonly diagnosed imported parasitic infection in Scotland
- Travellers to countries where Schistosomiasis occurs may be at risk of infection if they do not take precautions on their trip
Sources of Infection

• Travellers may become infected through contact with **fresh** water (e.g. streams, lakes, ponds and rivers)

• **Examples:**
  - Swimming
  - Paddling
  - Diving
  - Snorkelling
  - Water sports, e.g. kayaking
  - Bathing / Showering in water that has come from an infected source
Freshwater snails release microscopic **infective forms** (cercariae) into fresh water.

**Infective forms** in freshwater burrow through skin in contact with water.

Adult worms develop inside the body and live in blood vessels near bladder or bowel.

Adult worms lay eggs that move through body tissues and are passed out with urine/bowel motions.

If eggs get into freshwater, they can infect more snails and the cycle starts again.

**Schistosomiasis Lifecycle**
Symptoms of Schistosomiasis

Usually there are **no** symptoms, but the following can occur:

**Itchy Rash** - just after water contact
  - “Swimmer’s Itch” sometimes happens due to cercariae penetrating skin

**Acute symptoms** - 3-12 weeks after infection
  - Some people get a rash, fever and/or cough/abdominal pain

**Chronic symptoms** - months/years after infection
  - Haematuria, dysuria, altered bowel habit, blood in bowel motions, abdominal pain, genital lumps
  - Symptoms are due to eggs
Diagnosis of Infection

Diagnosis is initially by a blood test:

- If a traveller has symptoms after their trip they should contact their GP for a blood test which detects antibodies to Schistosomiasis.
- This test must be taken 8 – 12 weeks after exposure.
- If a traveller has no symptoms, but has been exposed they should contact their GP for advice.
Treatment of Schistosomiasis

- Treated with an oral medication called Praziquantel
- This drug is unlicensed in the UK and available through hospital pharmacies only
- Prescribed in the UK in an Infectious Diseases Unit to ensure appropriate dosing and patient management/follow-up
- Praziquantel kills the adult worms, not the immature forms or the eggs
Implications of untreated Schistosomiasis infection

- Schistosome parasites live for years in the body if not treated.
- As some people have no symptoms or symptoms only start years later, the infection may be missed and not get treated.
- The exact risk of untreated infection in someone with short-term exposure is not fully known.
- However, people who live in countries with Schistosomiasis can develop bladder cancer and liver damage years later, if untreated.
Prevention of schistosomiasis

- There is **no** medication or vaccination to prevent Schistosomiasis
- The only way of preventing this infection is by avoiding exposure
How do travellers avoid infection? -Pre Travel

• Travellers should research their destination to establish if Schistosomiasis occurs in the area they are going to visit
  – If the area they are visiting has Schistosomiasis, they can plan non-water based activities
  – They should NOT plan water based activities such as swimming, diving, kayaking etc in fresh water

• Choose their accommodation carefully
  – Ask their accommodation about its water supply.
  – Hotels and lodges close to infected water may use these sources for water supplies e.g. for showers
How do travellers avoid infection?- During Travel

• Travellers should not rely on local information on the risk of infection, no matter how convincing
  – admitting there is Schistosomiasis is not good for tourism
• Choose non-water based activities.
  – Trips using large boats and leaving from jetties are usually safe.
• Avoid all contact with potentially infected freshwater, including swimming and water sports
  – Chlorinated swimming pools and the sea are not a risk for Schistosomiasis
How Do Travellers Avoid Infection? - Myths

- The following are prevention myths and cannot be relied on:
  - Infection is not spread in deep water where there are no snails.
  - Infection is isolated only to certain parts of lakes, streams etc.
  - Brisk towelling after exposure prevents infection.
  - Use of insect repellents prevents infection (most repellents are water soluble).
Key Points

• **Schistosomiasis** is also known as **Bilharzia**
• The infection is caused by species of **parasitic worm**
• Travellers may become infected through contact with **fresh** water
• There is no medication or vaccination to prevent **Schistosomiasis**
• Travellers to countries where **Schistosomiasis** occurs may be at risk of infection if they do not take precautions on their trip.
Sources of further information

Further information about Schistosomiasis:

• TRAVAX website

• Travel Health Guidance For Schools Produced by the Travel and International Health Team (TRAVAX) Version: 3 (2017)

• Contact the Travel and International Health Team (Health Protection Scotland) 0141 300 1100