

## Handout Notes for Infectious Diseases (Tuberculosis) 2009

- **More than half of new cases of TB first present to acute medical services.**
- **Involve local TB services early in discussions.**

- 1) All patients with a productive cough > **3 weeks** should have a CXR
- 2) **Send sputum from A&E for AAFB** microscopy if you suspect TB  
*strong suspicion:* history of TB or close contact, from high prevalence country, HIV+, unexplained haemoptysis, upper lobe pneumonia, cavities
- 3) Where the CXR suggests either TB or pneumonia it is better to arrange rapid investigations than give a trial of antibiotics
- 4) Manage the patient in the community to reduce nosocomial transmission risk
- 5) Initial sputum microscopy is negative in most cases. To increase yield take sputum on 3 consecutive days – first cough of the morning is best. **Induced sputum** is as effective as bronchoscopy
- 6) If smear microscopy is negative but clinical suspicion is high then start standard anti-TB therapy: cultures will take 3 – 8 weeks to grow
- 7) Make a careful assessment of likely adherence and consider directly observed therapy  
**risks of poor adherence:** previous poor adherence, drug and alcohol misuse, homelessness, language barriers, mental illness, perception of stigma (cultural)
- 8) Drug resistance is uncommon but serious if missed. Make a risk assessment. Previous treatment is strongest predictor (acquired resistance). Patients with isoniazid resistance will probably be OK but need extended therapy. If you suspect multi-drug resistance (MDR) send positive sputum for **rapid rpoB** genotype testing (Rifampicin-resistance)
- 9) Standard treatment is **four drugs:** Rifampicin, Isoniazid, Pyrazinamide, Ethambutol. It is a once daily regime based on weight
- 10) *Rifampicin* affects levels of methadone, warfarin and OCP through P450 induction – use alternative contraception. *Isoniazid* may cause hepatitis in older patients or those with underlying liver disease – warn patients to stop if jaundice or vomiting develops. *Ethambutol* rarely causes optic neuritis – use a different drug if it will be difficult to assess visual change

- 11) If the patient is unwell then admit to hospital and nurse in a negative pressure side room. Wear masks
- 12) Smear positive patients are infectious until 14 days of treatment. They can still be **managed at home** if they are sensible with no new contacts
- 13) **All patients should be offered an HIV test** (UK co-infection rate ~5%)
- 14) Contact tracing should be done in consultation with the local Health Protection Unit. There is no urgency although families may be understandably anxious. You should have a clear plan before beginning workplace screening.
- 15) **There are two questions to address in screening:** has a contact been infected and if so is the infection causing disease?
  - a) establish contact history
  - b) assess for symptoms
  - c) CXR
  - d) Baseline bloods (ESR, CRP, FBC, Biochem)
- 16) If the patient has features of an illness then investigate further
- 17) If no disease then arrange either a Mantoux test or an **IGRA** (Interferon Gamma Release Assay: Quantiferon or T-spot). IGRA is useful if a patient has been immunized with BCG which may produce a false positive Mantoux
- 18) Remember to act on laboratory data on drug susceptibility
- 19) TB is a notifiable disease
- 20) The management of 80% of patients with pulmonary TB is straightforward.
  - A recognize the potential diagnosis**
  - B investigate thoroughly to secure a microbiological diagnosis**
  - C consider risk of underlying drug resistance**
  - D assess for poor adherence**
  - E warn the patient about potential drug toxicity**
  - F identify any public health risk**

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