

**CLINICAL SKILLS – Examining for Causes of Pyrexia**

***Possible OSCE scenario:** You are the doctor covering the medical wards and have been asked to review a patient on the ward with a fever of 38.5 degrees. Please examine the patient and explain to the examiner what you would do next.*

**Examination Technique**

- Introduce yourself
- Wash your hands
- Explain to the patient that you have been asked to review them due to a high temperature
- Ask for the patients **observations** – if any signs that patient is unwell/septic advise you would assess using ABCD technique, otherwise continue as below
  
- Look at the patient from the end of the bed:
  - Look for any obvious signs of infection or abnormality– e.g. tachypnoea,
  
- Review the hands:
  - Peripheral stigmata of infective endocarditis
  - Feel the temperature
  - Capillary refill
  
- Feel the pulse:
  - Feel for rate and rhythm, and pulse volume
  
- Look at both arms:
  - Look for any areas of erythema or rashes
  - Look at any peripheral **access points** (cannula's, PICC lines) – check dates on them and check surrounding skin areas
  
- Feel the neck
  - Feel for any enlarged **lymph nodes** – if any are enlarged note if they are unilateral or bilateral and state what they feel like (rubbery, firm, mobile)
  - Check for **neck stiffness**
  
- Look in the mouth
  - Check for **enlarged tonsils**
  - Check for any **oral infections** – e.g. candida, ulcerations
  - Check **mucosal membranes**
  - Look for any abnormalities in the **lips and tongue** (Kawasaki disease)
  
- Look in the eyes
  - Offer to check the retinae with a fundoscope
  
- Look at the rest of the body for a full skin examination (ensure undress patient fully to check all areas)
  - Erythema
  - Scars, wound infections
  - Rashes

- Explain at this point you would do a full cardiac, respiratory, neurological and abdominal examination but will concentrate on the main points now.
- Respiratory:
  - Listen to the chest for any signs of infection – crepitations, bronchial breathing
- Cardiac:
  - Feel the apex beat
  - Listen to the heart sounds for any **murmurs**
- Examine the abdomen:
  - Feel for any tenderness
  - Feel for any enlarged organs (spleen)
  - Listen for bowel sounds
- Neurology examination if indicated:
  - Kernigs sign
  - Any cranial nerve deficits or peripheral neurology
- Thank the patient
- Summarise what you have found
- Explain to the examiner what you would do next:
  - Take a full history
  - Explain you would like to do a **full septic screen**:
    - Full set of bloods including FBC and CRP
    - Blood cultures
    - Urine dip +/- MC&S
    - Chest X-ray
    - Specific investigations if anything picked up on examination e.g, sputum sample, wound swab
  - Explain you would like to give the patient paracetamol to bring their fever down (check allergies and whether has already had)
  - If the patient had any signs of sepsis or SIRS explain you would resuscitate the patient e.g. IV fluids and treat appropriately e.g. antibiotics
  - Explain you would like to read through the patients notes and drug chart to check if any history of infection or risk factors

### Definitions

- Pyrexia = temperature above the normal range
- Usually considered > 37.5 degrees
- Pyrexia of unknown origin = fever of over 38.3 degrees or greater for at least 3 weeks with no identified cause after 3 days of hospital evaluation or three outpatient visits

### Differential Diagnosis

- Most common infections:
  - Bacterial:
    - Chest infection

- Urinary infection
  - Cellulitis
  - GI – gastroenteritis, cholangitis
- Viral infections
  - Influenza
- Rare infections but important to rule out:
  - Infective Endocarditis
  - Meningitis
  - Encephalitis
  - HIV (seroconversion)
- Non-infective causes:
  - Inflammatory: Inflammatory bowel disease, Kawasaki disease, Juvenile RA
  - Neoplastic: ALL, lymphoma
  - Drugs/toxins