

Aim

This protocol has been developed to facilitate diagnosis/treatment of Catheter Related Blood Stream Infection (CRBSI), and to streamline data collection for our hospital wide surveillance program.

Terminology

Central Line: This will include all central venous access devices (CVAD) including Peripherally Inserted Central Catheters (PICC), Tunneled Cuffed Catheters (e.g. Hickman and Broviac type catheters), Femoral, Implanted Port, Jugular and Subclavian catheters.

Catheter Related Bloodstream Infection (CRBSI): This will be determined by presence of clinical signs of infection with no other source and one of the following:

- Both positive peripheral and central blood cultures.
- Central cultures will be positive two hours before the peripheral cultures.
- In addition a positive tip culture may assist with diagnosis.

Recognising CRBSI

The Sepsis Care Initiative (2006) provide the following SIRS (systemic inflammatory response syndrome) definition:

≥ 2 of the following

- white blood cell count >12,000/mm³ or <4,000/mm³ or >10% immature neutrophils
 - Temperature >38 C or <36 C
 - Heart rate >90 beats/min
 - Respiratory rate >20 breaths/min
- In addition inflammation, swelling and exudate may be present at the entry site.

If you suspect a CVAD sepsis, please follow the protocol in the next section.

Reference: Sepsis Care Initiative (2006) Sepsis: Early recognition can save lives.

Protocol

- If suspected CRBSI the following samples should be sent for analysis;
 - **Peripheral** Blood culture (or sample from a fresh site)
 - **Central** Blood culture, from the existing line
 - **Swab** from the line site
 - If line removed send 4cm of the catheter **Tip**
 - **Inform** Vascular Access Team

Notes

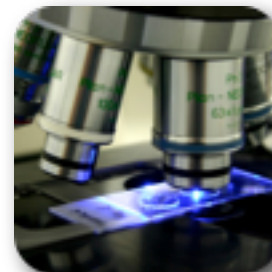
- Peripheral and central samples allow us to check 'time to positivity' to aid diagnosis
- All blood cultures should be taken at approximately the same time. No blood should be discarded when aspirating from the line.
- Label all samples with site at which they have been obtained. Please see blood culture guide lines for further information.
- Refer to the antibiotic prescribing policy.
- Please inform the vascular access team of any patients meeting this criteria.

1



Suspected CRBSI

2



Discuss with clinical microbiology

3



Peripheral and central blood cultures

4



Refer patient to vascular access team

5



Consider removal of the line