



## MANAGEMENT OF *STAPHYLOCOCCUS AUREUS* BACTERAEMIA

### SUSPECTED/PROVEN *STAPHYLOCOCCUS AUREUS* BACTERAEMIA

**FLUCLOXACILLIN 2g (child: 50mg/kg up to 2g) IV 6-hourly** (4-hourly in severe sepsis / septic shock / suspected endocarditis)<sup>1</sup>

**PLUS**

**VANCOMYCIN loading dose 25mg/kg actual body weight followed by maintenance dose 15-20mg/kg 12-hourly**  
**(For neonate seek expert advice, child <12 yrs: 15mg/kg up to 500mg IV 6-hourly)**<sup>2,3</sup>

Target trough serum vancomycin level: 15-20mg/L<sup>4</sup>

DELAYED PENICILLIN HYPERSENSITIVITY: replace **flucloxacillin** with **cephazolin 2g 8-hourly (child: 50mg/kg up to 2g)** (6-hourly in severe sepsis / septic shock / suspected endocarditis)<sup>1</sup>

IMMEDIATE PENICILLIN HYPERSENSITIVITY: use **vancomycin** only

### CONFIRMED *STAPHYLOCOCCUS AUREUS* BACTERAEMIA

- An infectious diseases consult is strongly recommended. In the absence of onsite infectious diseases consultation, please contact one of the tertiary centers
- Drain pus where present
- Remove any potentially infected devices, e.g. venous catheter
- Assess for metastatic infective foci, e.g. Arthritis, discitis, ...
- Request echocardiogram in all patients<sup>5</sup>. For patients at increased risk of endocarditis<sup>1</sup> where echocardiography services are not available transfer of the patient is recommended

#### METHICILLIN SUSCEPTIBLE (MSSA)

- Cease vancomycin
- Continue flucloxacillin<sup>6</sup>

#### METHICILLIN RESISTANT (MRSA)

- Cease flucloxacillin
- Continue vancomycin aiming for trough levels of 15-20mg/L<sup>4</sup> (children: 10-20mg/L)

**REPEAT BLOOD CULTURE 48-72 HOURS AFTER COMMENCING ANTIBIOTICS**

**Uncomplicated *S. aureus* bacteremia** if meets **all** of criteria below can be **treated for 14 days**<sup>7</sup>

- Negative blood culture at 48-72h
- Rapid resolution of fever
- Normal valves on Echocardiogram
- An identifiable source has been removed
- No evidence of metastatic seeding
- No intravascular prosthetic device
- Not immunocompromised

**Complicated *S. aureus* bacteremia**

- Treat for a **minimum of 4-6 weeks**

### Comments

1. Increased risk of endocarditis:
  - a. Cardiac murmur
  - b. Embolic lesions
  - c. Persistent fever despite antibiotics
  - d. Blood cultures positive 48-72h after starting antibiotics
  - e. Prosthetic heart valve / pacemaker / implantable defibrillator
2. In children < 12 years, 30mg/kg up to 1g IV 12-hourly of vancomycin in an accepted alternative dosing
3. Renal impairment: dose adjustment may be required – please refer to eTG for details.
4. Troughs up to 25mg/L are accepted especially in MRSA bacteremia with MIC>1.5
5. In children, perform echocardiography only if there are known cardiac/valvular abnormalities, prolonged fever or persistently positive blood cultures
6. In penicillin susceptible cases, switch to benzylpenicillin 1.8 – 2.4g IV 4 hrlly (higher dose recommended in severe sepsis / septic shock / suspected endocarditis)
7. Uncomplicated *S. aureus* bacteremia in children requires 7-14 days of IV therapy. For all other cases seek expert opinion

It is recommended **for all cases** to seek specialist infectious diseases advice to improve outcome via one of the following hospital switchboards (7 day/24 hr service).

**Royal Perth Hospital**  
Phone 9224 2244

**Fremantle Hospital**  
Phone 9431 3333

**Fiona Stanley Hospital**  
Phone 6152 2222 (effective Feb 2015)

**Sir Charles Gairdner Hospital**  
Phone 9346 3333

**Joondalup Health Campus**  
Phone 9400 9400

**Princess Margaret Hospital for Children**  
Phone 9340 8222