

Emergency Diagnosis and Management of SEPSIS

Anybody on IV antibiotics or with unexplained hypotension needs this assessment:

INCLUSION CRITERIA

SIRS: 2 of these ←

- Temperature **over 38** or **under 36**
- Heart rate **over 90**
- Respiratory rate **over 20**
- Arterial PaCO₂ **under 32mmHg**
- White Cell Count **over 11** or **under 4**
(or more than 10% of immature forms)
- Sepsis of unknown origin and on IV antibiotics

SEPSIS is SIRS arising from a documented infection

JVP = immediate clue regarding hypovolemia. If theres a JVP, there's probably enough blood to go around.

Septic shock

- Systolic Blood Pressure **under 90** - AFTER crystalloid fluid challenge-
- of more than 20-30ml/kg over 30 minutes
- Blood Lactate **over 4mmol/L**
- Oliguria +/- acute deterioration of mental state
- Acute end-organ dysfunction

SO, your patient is septic.

Now, fluids are their best friend. FLUIDS !!

FIND THE ABSCESS!!

...and drain it. antibiotics are very useful, but they will only touch the outside of the massive pocket of pus.

! pus may be hidden !

Head-to-toe survey, then-

- gallbladder
- kidney (pyelonephritis)
- joints (infectious arthritis)
- pelvis
- spine (epidural abscess)
- meningitis

and ORDER A CHEST X-RAY

1) AIRWAY, BREATHING, CIRCULATION.

May need to **intubate**.

2) venous access: big cannula in each arm

3) take **bloods:**

- FBC
- 2 x Culture (aerobes + anaerobes)
- ABGs
- Lactate
- EUC
- LFTs
- BSL
- Coagulation

4) IV FLUIDS: because the vessels are globally dilated, one must refill the new available space so that the heart may fill and beat again.

THUS: give 20 to 30 ml/kg over 30 minutes **until their systolic BP gets over 90**

5) Antibiotics as per department guidelines (give together with first fluids)

6) insert Urinary Catheter (to measure output)

7) keep giving crystalloid bolus 500mls over 30min until blood pressure normal

Patients blood pressure NORMALISED?

= Give noradrenaline (ONLY if central venous pressure is 8 to 12 mmHg)

ONLY UNTIL MAP is over 70

GOALS OF THERAPY:

- Central venous pressure 8-12 mmHg
- Mean arterial pressure over 70 mmHg
- SaO₂ over 93%
- Hematocrit over 30
- Central venous O₂ saturation of over 70