Empyema management

Evidence of EMPYEMA on Chest X-Ray?
Assessment based on local PEWS score/sepsis tool
Signs of cardiovascular instability
(Lactate > 2 or blood pressure below normal age adjusted range)
Signs of respiratory instability
(High Flow Oxygen OR FiO_2 >30%)

NO

PLAN A

- IV **Ceftriaxone** 80mg/kg OD. Add Clindamycin 10mg/kg QDS (max. per. dose 1.2g) if evidence of toxin mediated disease
- Maintain $SaO_2 \geq 92\%$ with additional O_2 therapy if required
- If clinical improvement, discharge on 2-4 week course of oral antibiotics
- If no clinical improvement/ongoing fever after 48-72 hours
  Activate PLAN B

If increased respiratory compromise (High Flow +/- $FiO_2 \geq 30\%$) or cardiovascular compromise at any stage – activate PLAN C

PLAN B

- Consider differential diagnosis
- Contact respiratory paediatrician at tertiary centre (Southampton or Oxford).
- Arrange **PROMPT** transfer to tertiary centre by appropriate DGH team **OR** discuss with SORT for advice
- Respiratory physician to determine need for chest drain insertion as per local protocol

If increased respiratory compromise (High Flow +/- $FiO_2 \geq 30\%$) or cardiovascular compromise at any stage – activate PLAN C

YES

PLAN C

- Contact PICU via SORT
- Transfer patient to theatre or ICU in preparation for I&V and drain insertion
- Intubation and ventilation prior to drain insertion
- Anticipate cardiovascular deterioration on induction - ensure fluid bolus and vasopressor/inotropes available. Consider peripheral adrenaline infusion prior to I&V
- Preparation for **simultaneous** drain insertion on intubation if deterioration
- Transfer by SORT to PICU
- Twice daily instillation of Urokinase into chest drain – 6 doses
- Once clinical improvement wean ventilation and extubate
- Transfer to paediatric ward for ongoing management

SORT Dec 2024 Review 2027
www.sort.nhs.uk