



EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

Management of paediatric severe sepsis-a brief overview

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A. Control the source of infection

- Antibiotics
 - Broad spectrum
 - inappropriate cover → high mortality
- Surgical
 - Debridement
 - Drainage



B. Management of shock

- Before admission in the ICU
- ICU
 - Fluid resuscitation: early and aggressive
 - Inotropics
 - Respiratory support
 - Treatment of biochemical abnormalities
 - Hyperglycaemia
 - Other: hypo: Ca, K, Mg, PO₄
 - Correction of DIC



a. Fluid resuscitation

- Aggressive
- Repeated if necessary
- Human albumin solution 4,5%
 - May be more effective than isotonic saline
 - HMW starches not to be used in children (cave renal)



b. Inotropics

- Initially dopamine, dobutamine via periph. vein
- Adrenaline, noradrenaline via CVC
 - After intubation
- Vasopressin and vasopressin-like



c. Respiratory support

- High-flow O₂
 - In all patients
- Intubation and ventilation
 - ARDS
 - Fluid refractory shock
 - Decreasing consciousness (GCS under 8 or loses 3 in 1h)
 - Other signs of raised intracranial pressure
 - Low tidal volume ventilation



d. Treatment of biochemical abnormalities

- hyperglycaemia
 - Debatable if risk not greater than benefit
- Hypoglycaemia
- Hypocalcaemia
- Hypomagnesaemia
- Hypophosphataemia



e. Treatment of DIC

- coagulopathy
 - FFP
 - Platelets
 - Cryoprecipitate
- Compartment syndrome
 - Fasciotomy?



f. Treatment of raised intracranial pressure

- Meningitis?
 - Fluid resuscitation if coexistent shock
- Cerebral oedema?
 - Avoid fluid resuscitation!
 - Mannitol



g. Other

- No aPC in children (RESOLVE study)
- Corticosteroids?
 - Generally not recommended
 - Always in meningitis
- ECMO?



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References

Curr Top Med Chem. 2008;8(7):603-14.

New therapies for sepsis.

[Cunnington A](#), [Nadel S](#).