

Sepsis

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■ Diagnostic criteria for sepsis

(2001 International Sepsis Definition Congress):-

■ General variables:

fever > 38.3°C or hypothermia < 36°C

heart rate > 90/min

respiratory rate > 20/min

altered mental status

edema or positive fluid balance

hyperglycemia in absence of diabetes

■ Inflammatory variables:

WBC > 12000 or < 4000/uL, or 10% immature (band)

forms; elevated plasma C-reactive protein (CRP)

■ **Organ dysfunction variables:**

Neurological: altered mental status, polymyopathy, polyneuropathy

Cardiovascular: hypotension (septic shock), arrhythmias, elevated central venous pressure

Respiratory: slow or fast respiratory rate, hypoxemia, $\text{PCO}_2 \geq 50\text{mmHg}$, acidosis

Gastrointestinal: GI bleeding or perforation, pancreatitis, ileus, intestinal ischemia or infarction

Hepatic: hyperbilirubinemia or jaundice, elevated transaminase, lactate dehydrogenase, alkaline phosphatase, hypoalbuminemia, prolonged prothrombin time

Renal: oliguria, elevated serum BUN and creatinine

Hematologic: thrombocytopenia, leukocytosis or leukopenia, coagulopathy

Endocrine: hyperglycemia, hypertriglyceridemia, weight loss

Immunologic: hospital-acquired infections, pyrexia, increased leukocytosis, alterations in immune activity

- **Sepsis** = infection (documented or suspected) + some of above systemic general and inflammatory responses reaction (SIRS) to infection
- **Severe sepsis** = sepsis + organ dysfunctions (due to microvascular injury from SIRS)

Therapy of sepsis

- **Early recognition = key importance for successful treatment of sepsis**
- **Initial management = supportive therapy + early administration of appropriate effective antibiotics**
- **Effective organ support especially cardiovascular, respiratory and renal functions**
- **Mortality of sepsis = 40-60%**