23.10 SEPSIS IN ICU

A41.9

DEFINITION

Sepsis is defined as life-threatening organ dysfunction caused by a dysregulated host response to infection. Organ dysfunction is defined as an acute increase in SOFA (Sequential Organ Failure Assessment) score of at least 2 points. Patients with sepsis have a significantly higher mortality than those with an infection without sepsis.

LoE:IVb[liv]

Septic shock is characterised by hypotension requiring vasopressors to maintain MAP ≥ 65mmHg despite adequate fluid resuscitation, plus a serum lactate >2mmol/l. Patients with septic shock have a significantly higher mortality (>20%) than those with sepsis without septic shock.

Table 23.6: Sequential organ failure assessment (SOFA) score

System	Score				
	0	1	2	3	4
Respiration					
PaO_2/FIO_2 mmHg (kPa)	≥400 (53.3)	<400 (53.3)	<300 (40)	<200 (26.7)	<100 (13.3)
				with respiratory support	
Coagulation					
Platelets, $x10^3$ µ/L	≥ 150	<150	<100	<50	<20
Liver					
Bilirubin in µmol/L (mg/dL)	<1.2 (20)	1.2-1.9 (20-32)	2.0-5.9 (33-101)	6.0-11.9 (102-204)	>12.0 (204)
Cardiovascular	MAP ≥ 70mmHg	MAP < 70mmHg	Dopamine <5[a] or dobutamine (any dose)[a]	Dopamine 5.1.-15[a] or adrenaline ≤ 0.1[a]	Dopamine >15[a] or adrenaline >0.1[a]
Central Nervous System					
Glasgow Coma Scale[b]	15	13-14	10-11	6-9	<6
Serum creatinine in µmol/L (mg/dl)	110 (<1.2)	110-170 (1.2-1.9)	171-299 (2.0-3.4)	300-440 (3.5-4.9)	440 (>5.0)
Urine output, ml per day				<500	<200

FIO_2 = Fraction of inspired oxygen; MAP = mean arterial pressure; PaO2 = partial pressure of oxygen

[a] Catecholamine doses are given as per $\mu g.kg^{-1}.min^{-1}$ for at least 1 h.

[b] Glasgow Coma Scale scores range from 3 to 15; higher score indicates less severe neurological disorder

Adapted from: Vincent JL, Moreno R, Takala J, et al. The SOFA (Sepsis-related Organ Failure Assessment) score to describe organ dysfunction/failure. Intensive Care Med. 1996;22:707–710

LoE:IVb[iv]