

Appendix A

Definitions of organ failures

A. Cardiovascular System Dysfunction

- SBP $\leq$ 90 mm Hg or drop of more than 40 mm from normal systolic pressure
- Or
- MAP $\leq$ 65 mm Hg for at least one hour despite adequate fluid resuscitation (2 L saline equivalent)
- Or
- Need for vasopressors.

B. Renal Dysfunction

- Elevation of normal baseline serum creatinine to >1.5 X normal value.

C. Respiratory System Dysfunction

- Ventilation required (more than immediate for surgery).

D. Hematologic Dysfunction

- Platelet count $<80,000/\text{mm}$.

E. Metabolic Dysfunction

- Lactate level >3 mmol/L (1.5 times the upper limit of the normal).

F. Central Nervous System Dysfunction

- An acute alteration in mental status not attributable to sedation.

G. Hepatic Dysfunction

- Elevation of normal baseline serum total bilirubin to ≥ 2 mg/dl or $35 \mu\text{mol/L}$ (unless due to primary biliary disease e.g. ascending cholangitis, Cholecystitis).

Appendix B

Formulas

A. Creatinine clearance

1. Cockcroft and Gault equation¹

$CrCl = [(140 - \text{age}) \times \text{ideal body weight (IBW)}] / (\text{Scr} \times 72) (\times 0.85 \text{ for females}).$

2. Modification of Diet in Renal Disease (MDRD)²

$GFR = 186 \times (\text{SCR})^{-1.154} \times (\text{age in years})^{-0.203} \times 1.210 \text{ (if patient is black)} \times 0.742 \text{ (if female)}.$

B. Ideal body weight (IBW)³

For males, $IBW \text{ (kg)} = 50 + (0.91 \times (\text{height in cm} - 152.4))$

For females, $IBW \text{ (kg)} = 45.5 + (0.91 \times (\text{height in cm} - 152.4))$

C. Dosing body weight (DBW)⁴

$DBW = IBW + 0.25 (\text{actual body weight} - IBW)$

Table: Dose adjustments for antimicrobial therapy in very obese patients

Antibiotics	Recommended dosing weight	References
β-lactam	$IBW + 0.3 (ABW - IBW)$	5
Vancomycin	Actual body weight	6
Ciprofloxacin	$IBW + 0.45 (ABW - IBW)$	7
Gentamycin	$IBW + 0.43 (ABW - IBW)$	8
Amikacin	$IBW + 0.38 (ABW - IBW)$	9
Amphotericin	Actual body weight	10

IBW= Ideal body weight; ABW = Actual body weight

CrCl: Creatinine clearance; Scr: Serum creatinine

References

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