ICU Management Protocol No. 5

INOTROPIC AND VASOPRESSOR SUPPORT

A. Inotropic and vasopressor support in Septic Shock

Septic shock is defined as hypotension despite adequate fluid resuscitation, together with evidence of perfusion abnormality (i.e. oliguria, mental impairment, lactic acidosis) in association with sepsis.

- Ensure adequate fluid resuscitation.
- Target CVP – for non ventilated patients is 8-12 mmHg and for ventilated patients is 12-15mmHg.
- Target MAP > 65mmHg

The initial vasopressor of choice is either dopamine or noradrenaline, administered through a central venous catheter. Place arterial line as soon as practical.

1. Commence infusion dopamine (200mg diluted in 50mls 0.9% NS or D5%)
   Dosage range 5-20mcg/kg/min
   'Dopamine-resistant' shock is defined by MAP < 65 despite administrating dopamine at infusion dose of 20mcg/kg/min.
   Or
   Start infusion noradrenaline (4mg diluted in 50mls 0.9% NS or D5%)
   Dosages range 0.02-1.5mcg/kg/min

2. Add IV hydrocortisone 50mg QID or 100mg TDS

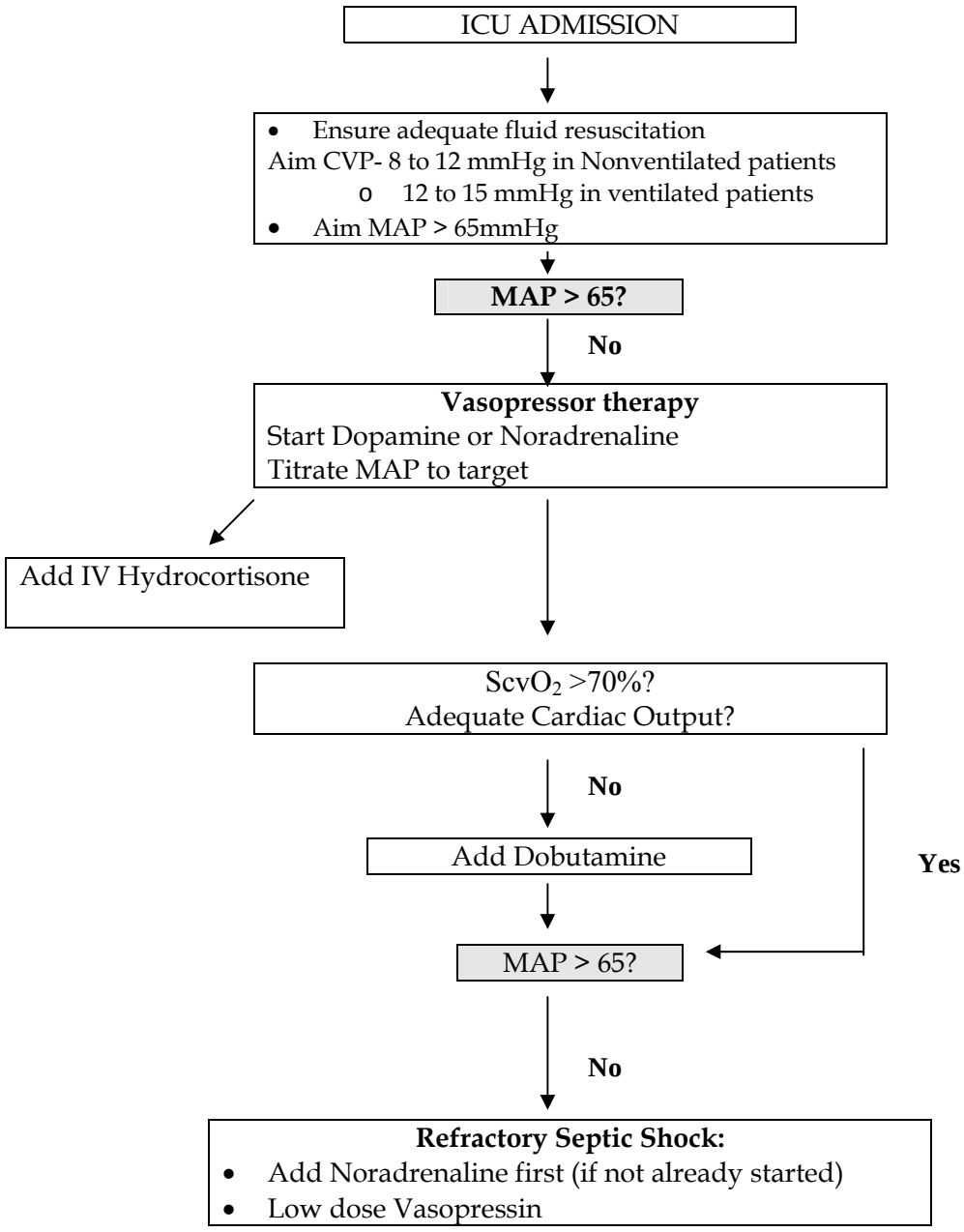
3. Add infusion dobutamine (3-5mcg/kg/min) if $ScvO_2$ <70%.
   Consider dobutamine as inotropic support in patient with low cardiac output (Infusion up to 20 mcg/kg/min)
   Dilution: 250mg in 50mls 0.9% NS or D5%

   Caution: dobutamine may drop MAP

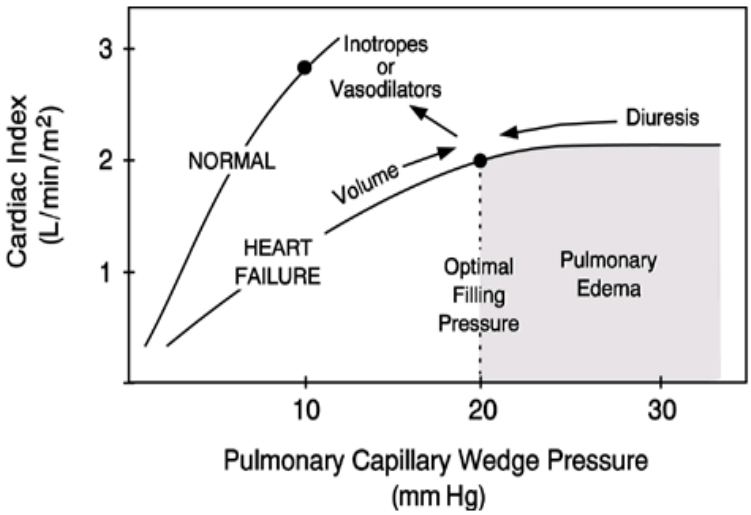
4 If MAP ≤ 65mmHg despite adequate fluid resuscitation and high dose of vasopressors, may consider infusion vasopressin (20 Units diluted in 40mls 0.9%NS or D5%).
   Dosages range 0.01-0.04 Units/min.

Refer to flow chart on next page

INOTROPIC AND VASOPRESSOR SUPPORT IN SEPTIC SHOCK



B. Inotropic and vasopressor support in Cardiogenic Shock



Dobutamine:

- an inodilator
- dilute 250mg in 50mls of 0.9% NS or D5%
- dosage range 5-20mcg/kg/min
- to be used when CI↓ (<2.2 l/mim/m²), MAP↓ (<65mmHg) with a high SVR (>2400 dyne.sec/cm^5 m²

May need to start noradrenaline infusion if MAP drop (<60mmHg) while on an inodilator.

Consider adding infusion adrenaline (3mg in 50mls of 0.9%NS or D5%) at 0.02-1.0 mcg/kg/min.

It is desirable that use of inotropes is guided by cardiac output monitoring.

If remains in cardiogenic shock-consider intra aortic balloon pump and cardiac consult.