SHOCK

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**Definition** - Shock is a syndrome of derangement in oxygen delivery or utilization, leading to cellular hypoxia and organ dysfunction or quite simply inadequate tissue perfusion.

**Hypovolemic shock** - inadequate tissue perfusion is secondary to inadequate preload.

**Distributive shock** - inadequate tissue perfusion is secondary to vasodilation either from loss of sympathetic tone or sepsis.

**Biochemistry of shock** - mitochondria

**Clinical scenario** - ABC

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**Clinical Markers of shock**

*Decompensated shock vs Compensated shock*

If shock is inadequate tissue perfusion then the best marker would be a perfusion marker

**Perfusion markers - Global**

Lactate / Base deficit

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**Resuscitation** is the correction of shock. The ultimate goal is to restore perfusion and adequate oxygen delivery to tissue i.e. OPTIMIZE OXYGEN DELIVERY.

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**Keep SaO₂ > 90%**

Supply supplemental O₂

Mechanical ventilation, if necessary

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**Optimize Cardiac Index**

May need early hemodynamic monitoring

Assess volume status (Preload)

PCWP < 15

Volume expansion

Reassess to keep: PCWP 15-16 mm Hg

MAP 60-80 mm Hg

SvO₂ > 65-70%

Delivery Independent O₂ consumption

Goals met

Goals not met

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**Optimize Hb**

11-13 g/dL

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**Consider vasodilators**

Nitroglycerin

Nitroprusside

Consider α agonist

Norepinephrine

Ephedrine

Norepinephrine

Plus

Dopamine 2-3 µg/kg/min