

**Critical Case Study 1,2**

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**1 – MAP = 67mmHg, Lower than normal Due to low Blood Pressure(70 - 100 mmHg)**

**2 - Pulse pressure = 20 mmHg Lower than normal due to low blood pressure (30 - 40 mmHg)**

**3 - Cardiac Index = 1.5 Abnormal due to low cardiac output (2.5 - 4)**

**Stroke Volume 23.03 Abnormal due to decreased preload (60 – 100)**

**4 - Systemic Vascular Resistance = 1760 sec/cm5 Abnormal High due to the compensatory mechanism to increase blood pressure (800-1200 sec/cm5)**

**5 - Pulmonary Vascular Resistance = 80 Dynes/sec/cm Abnormal low (155- 250 Dynes/sec/cm)**

**6 - Ejection Fraction = 57.5% Normal ( 50- 70%)**

**7 - Possible Cause of these readings could be (Hypovolemia)**

**8 - Management : Fluid , Cut off Lasix , Give Oxygen , Control Bleeding if there is any , Identify if there is any electrolyte imbalance and treat them .**

**9 – CVP = 1.36 cm water**

**10 – effects of hypovolemia on preload (Decreased venous return)**

**Afterload will increase the resistance due to vasoconstriction**

**On the heart: will increase the heart rate (tachycardia)**

**11 – Inotropic drugs : will increase the contractility of the heart thus increasing the cardiac output**

**Vasodilators: will decrease the blood pressure by decreasing the SVR**

**Diuretics : will also decrease blood pressure by decreasing the Preload**

**IABP : will increase the cardiac output and the blood flow to the coronary arteries**

**Vasodilator On SVR : will decrease the resistance by dilating the veins**