

\* Shock:  $\downarrow$  Cardiac output,  $\downarrow$  Blood volume

\* V.C =  $\downarrow$  diameter  $\rightarrow$   $\uparrow$  TPR  $\rightarrow$   $\uparrow$  B.P  
\* V.D =  $\uparrow$  diameter  $\rightarrow$   $\downarrow$  TPR  $\rightarrow$   $\downarrow$  B.P

$$BP = CO \times TPR$$

\* Type of the shock:

- ① Cardiogenic shock
- ② Hypovolemic shock
- ③ Neurogenic shock
- ④ Anaphylactic shock
- ⑤ septic shock

\* Stage of shock:

- ① initial non progressive stage: activated compensatory include: acidosis
- ② progressive stage: hypoperfusion, worsening circulatory, metabolic derangement
- ③ irreversible stage: severe, survival not possible

\* Clinical features:

① The primary threat to life is the underlying initiating event:  
1- weak rapid pulse    2- Hypotension    3- tachypnea

② If patient survive, worsening renal function includes:

1- progressive oliguria    2- Electrolyte imbalance    3- Acidosis

\* Gluconeogenesis: stimulate liver to produce glucose by:

- 1- TNF
- 2-  $1\alpha$ -1
- 3- glucagon

- 4- growth hormone
- 5- glucocorticoids
- 6- catecholamines