



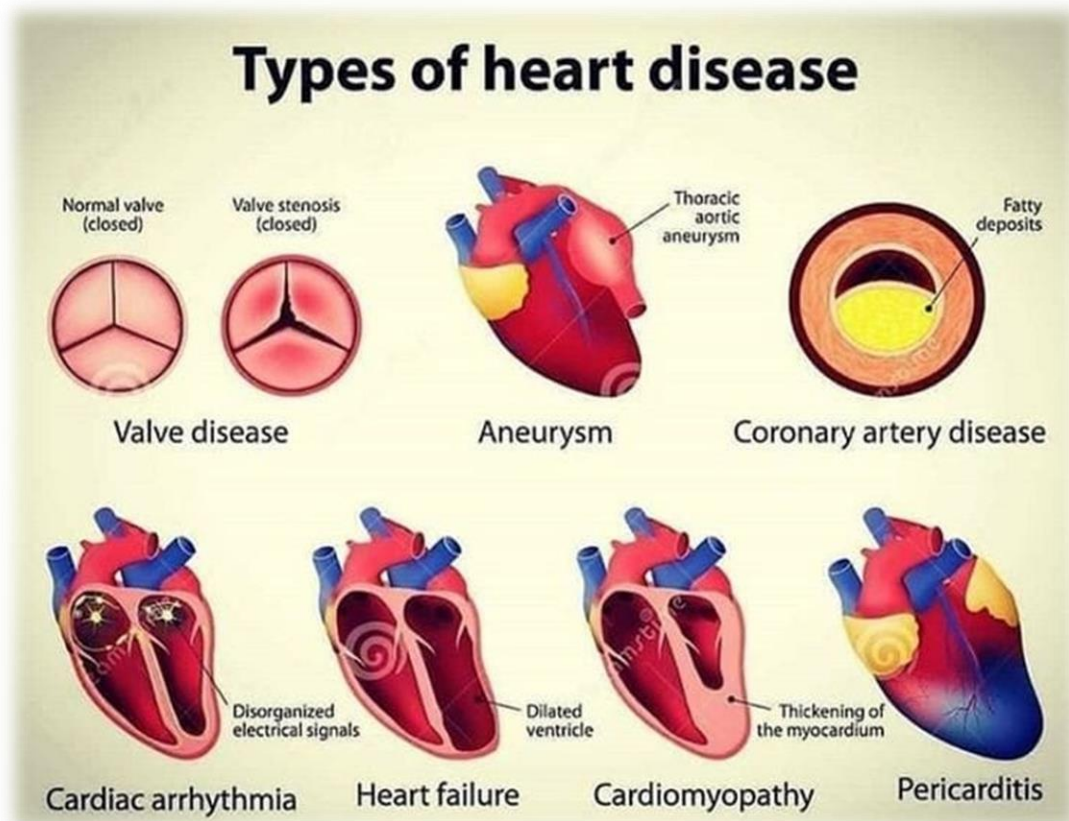
Heart diseases & anesthesia

Valvular heart disease :

Stenosis : is reduce in size of the valve opening due to a lesion .

- Blood pass through a small opening
- Heart need work harder to pump the blood though the stenosed valve .

Regurgitation : the opening of the valve not closed completely , some of the blood return back again to pushing side , in to the wrong direction .





Goal of the anesthesia :

- Estimate the severity of the lesion
- There is heart failure , its type & treatment.
- Current medication
- Anticoagulant using
- Smooth induction & extubation during GA
- Prevent exaggerated sympathetic ; parasympathetic or vagal stimulation
- Prevent hypo or hyper tension
- Prevent hypo or hyper volaemia
- Prevent any factor cause pulmonary or coronary vasoconstriction like hypoxia or awareness .
- Maintain sinus rhythm ,preload , after load

Types of valvular heart disease

1. Mitral stenosis
2. Mitral regurgitation
3. Mitral prolapse
4. Aortic stenosis
5. Aortic regurgitation
6. Tricuspid stenosis
7. Tricuspid regurgitation
8. Pulmonary stenosis
9. Pulmonary regurgitation

What are your anesthetic medications ?

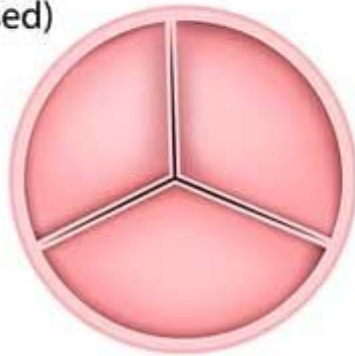
- Anticoagulant continue if minor short operation & stop at least 72 hours then start after 24hours after the operation .
- Anxiolytic free premedication as sedative, ,Zylocaine ,beta blockers , opioid .
- Good preO₂
- Avoid histamine release muscle relaxant



- Vecruinum is good cardio muscular relaxant .
- Maintainace by N2O +O2 +volatile isoflurane or Sevoflurane are more cardiac stability .
- Good analgesia ,O2 therapy , fluids input & output
- HDU admitting

Aortic Stenosis

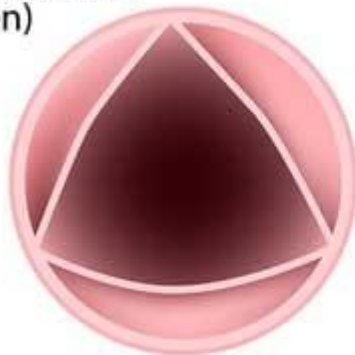
Normal valve
(closed)



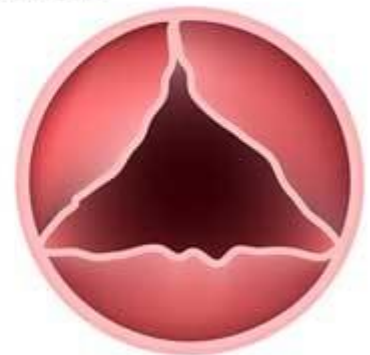
Valve stenosis
(closed)



Normal valve
(open)



Valve stenosis
(open)



Heart failure :

- Estimate the severity , type , controlling of the disease
- Communication with his physician & surgeon .
- Patient may need therapeutic catheterization .



Department of Anesthesia Techniques

Title of the lecture:- considerations

with diabetic patient
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- Patient may be on anticoagulant
- Patient estimate if has any type of arrhythmia & whether its controlled .
- Avoid rapid induction of anesthesia that cause sudden drop of C.O.P
- Avoid tachycardia or Bradycardia ,using of vasopressors ,fluids over load or dehydration
- Good analgesia , O2 therapy ,postoperative HDU & evaluate the heart failure .

Complications of anesthesia with heart failure :

Arrhythmia ,congestive heart failure ,pulmonary edema ,risk of thrombosis , CVA , IHD .

Coronary heart disease :

- Angina ,un stable angina , myocardial infarction .
- It is usually associated with HT , heart failure , arrhythmia & cardiopulmonary failure .
- Neuraxial anesthesia is good choice but avoid vasopressor & sudden drop in BP .
- GA is a good choice if controlled smooth induction till recovery
- Elective surgery post pond if ischemic changes for at least the last 3 months or need medical controlling .
- Try to avoid the work on cardiac muscles by sudden change in BP ,hypoxia , fluid over or decrease , shivering ,stress, pain , fever .

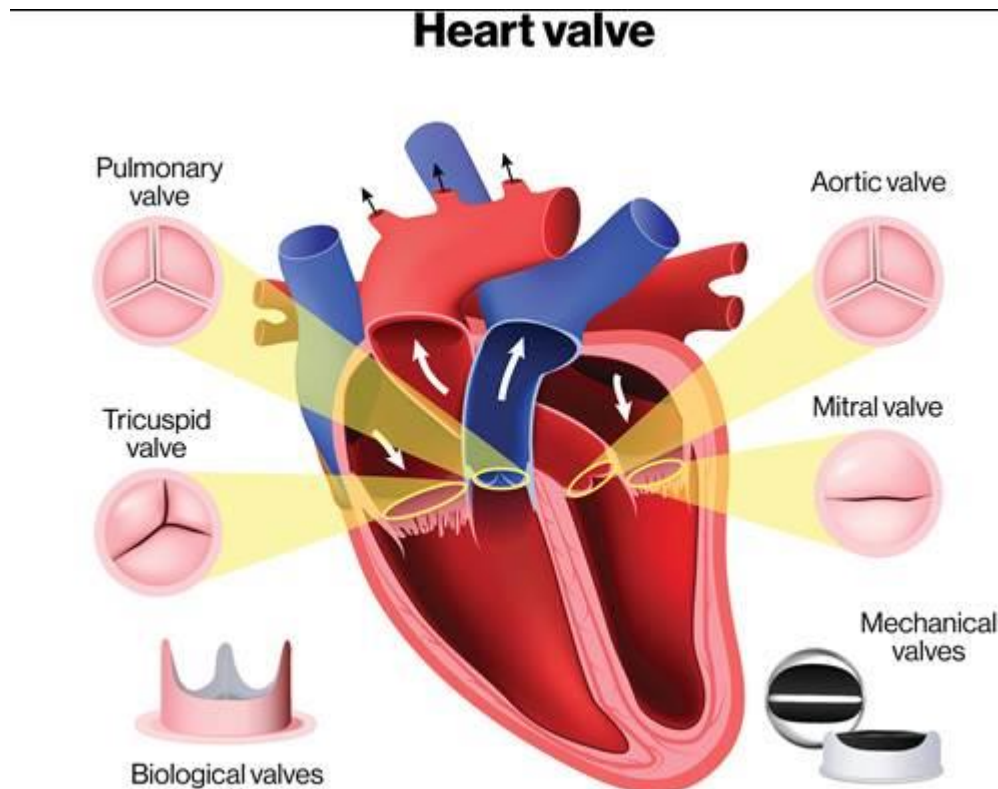


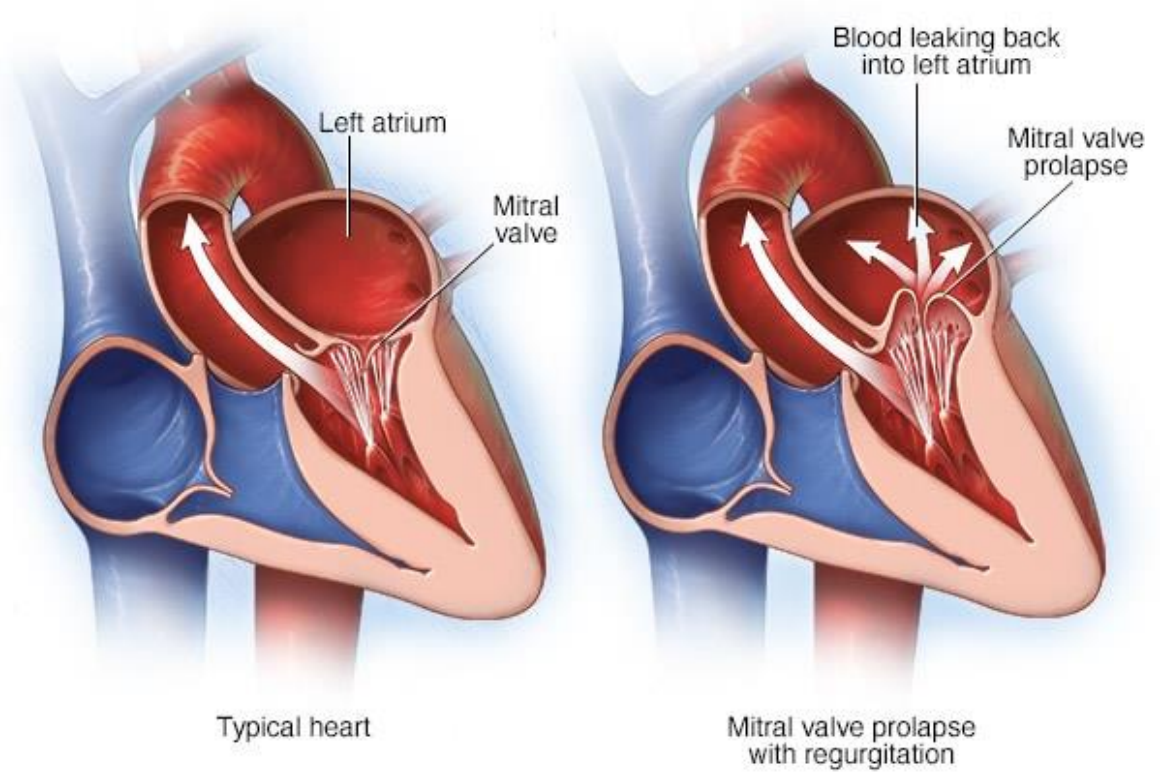
What is preload & after load of the heart ?

Preload : is the initial stretching of the cardiac muscles prior to contraction , it is related to ventricles filling .

After load : it's the amount of pressure , force or load of contractions of ventricular muscles to eject the blood

THANK YOU





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