# OBSTRUCTIVE SLEEP APNEA (OSA)

- OSA refer to b or about air flore in the presence of muccular efforte.
- · On Polysomnography, it can take 3 forme: Apriland arounal (RERA)
- · A duration of 10 eus or more in hegal. to Some any of these herpiratory efforts

### APNEA

. It is defined as a 90% on more heduction in the amplitude of air flow signal as measured by an oral freeal thermal senon, whose signal is not linear.

# 3 types:

- 1) Obetructive aprea event: There is bustking effort during aprea.
- 2) Central aprima event: There is No breathing effort dering aprima.
- 3) Mind aprea event: The aprea event start as a certial aprea & ends as obstinctive aprea

Hypopnes is a drop of 30% or more in the amplitude of the nasal presence sensor that last for 90% or more of the event & is ageo. with 4% or more deop in spor.

Aprea-Hypopria Index (AHI)! No. of aprea & Rypopria evente per Rosa. of Slep.

Si: The team OSA synohome refer to the combination of AHI of 5 as more by day time sommolence that is present for 2 or more days week

3 Grade: MILD: AHI 5-15

MODERATE: AHI 15-30

SEVERE: AHH \$ 30

# DATHOGENESIS OF OSA:

· Anatomic & functional upper airway obstruction.

I superatory related EEG arousal susponse.

Instability of ventilatory susponse to chemical stimulis

Aprea episodes are resolved as a result of sevents:

(1) 1 muscular activity @ the upper airway patency.

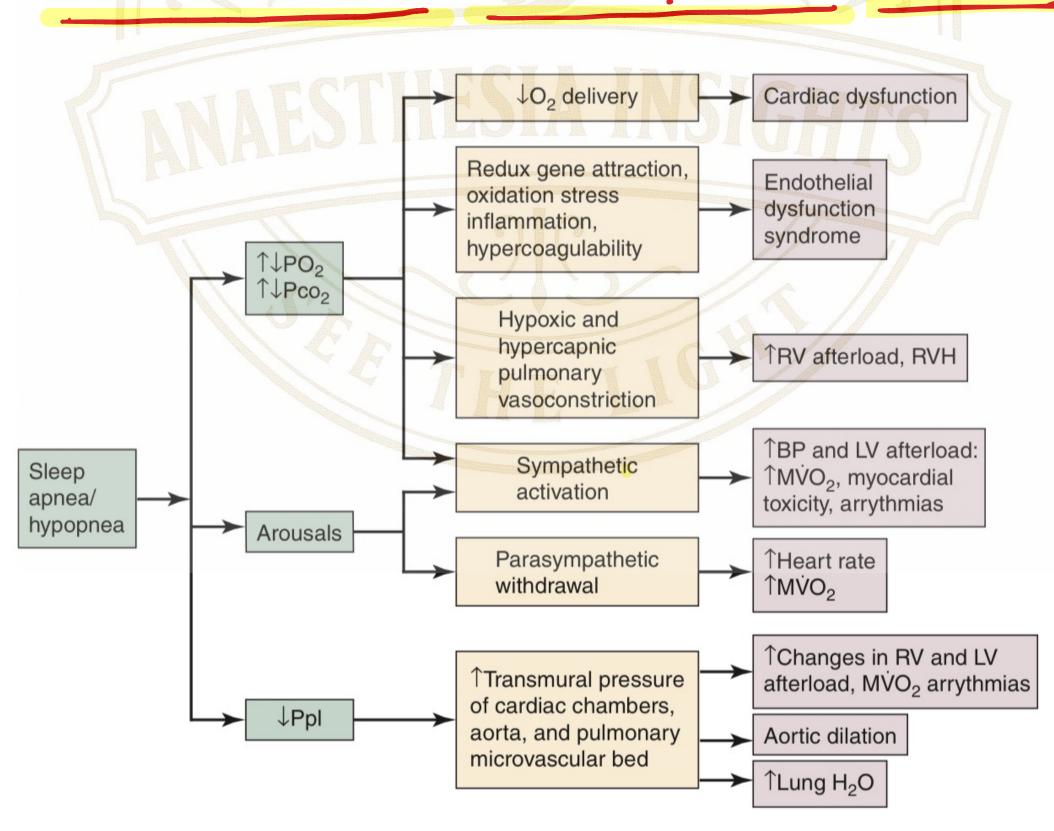
(2) 1 museular activity @ the thoraco alidominal heep. m/s that generales 1 -ve intrathoracie

Duriner.

(3) EEG avousal, which stimulake central susp.

### CARDIOVASCULAR

### CONSEQUENCES. OF DSA



## be systemic Effects

#### Demographic correlates of increased OSA prevalence

Male sex Age 40-70 y Familial aggregation

#### Risk factors

#### **Established**

Body habitus

Overweight and obesity Central body fat distribution Large neck girth

Craniofacial and upper airway **Abnormalities** 

#### Suspected

Genetics

**Smoking** 

Menopause

Alcohol use before sleep Nighttime nasal congestion OSA

### **Symptoms**

Habitual, loud snoring Nocturnal breathing pauses, choking, gasping Excessive daytime sleepiness

**Outcomes** and/or comorbid conditions

### Problems with daytime functioning

Daytime sleepiness

Motor vehicle crashes

Psychosocial problems

Decreased cognitive function

Reduced quality of life

#### Cardiovascular and cerebrovascular disease

Hypertension

Coronary artery disease

Myocardial infarction

Congestive heart failure

Stroke

Diabetes and the metabolic syndrome

### REATMENT:

Ohusity
Nosal obstruction

Toneil Grade 33

) Treating compellied conditions: - control Htm

| · Hypo Kysoidism                            | • CAD                                   |
|---|---|
| · Hypothyaoidiem                            | - MI                                    |
| · Graves de                                 | • CHF                                   |
| · Acromegaly                                | ·Stroke                                 |
| · Acromegaly<br>· NASH                      | · TZDM                                  |
| · Dcos                                      |   |
|   |   |
| PAP (Positive airway                        | Duemer                                  |
|   | estet the bowest air w                  |
| DAL of PAP Titration: To                    | and love event,                         |
| that eliminates all                         | Sus, Sus, Sus, Sus, Sus, Sus, Sus, Sus, |
| including abreas, by popular                | as we will                              |
| 20 that the RDI V                           | o bus than 5 hour                       |
| with arreptable Oxygenation                 | (spor > 90%) A                          |
| 1 De la leak level.                         |   |
| acceptable mark leak level.  [RDI: Resp. di | itilution Index.                        |
| TECHANISM:                                  | LIGIA                                   |
|   |   |

MECH

GOAL

1) I pharyngial transmural pressure (preumatic splint effut) 2) Reducing Pharyngeal wall thickness & airway edona. 3) 1 air way tone by muhanoseuptor stimulation.

4) 1 end-expiratory lung volume & producing a trachest try effect

## COMPLICATIONS:

- · Mechanical naeal obstruction or shiftiness
- · Farial peurure ulues
- . Skin rach.

Gral appliance Thurapy for OSA:

- · Mandibutar advancement device
- · Tongue retaining denice

Other device: Moral expiratory PAP.

Airway Sugical theapy:

- · laacheos tomy.
- · Maxillomandibular advancement
- · Lasu assisted uvulopalatoplasty.
- · Uvulopalato phany ngo planty.
- · Padio frequency ablation.

  Dalatal Implante