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Theotrical lecture 1
Anesthetic considerations of pheochromocytoma
By Dr. Amassi Yakdhan
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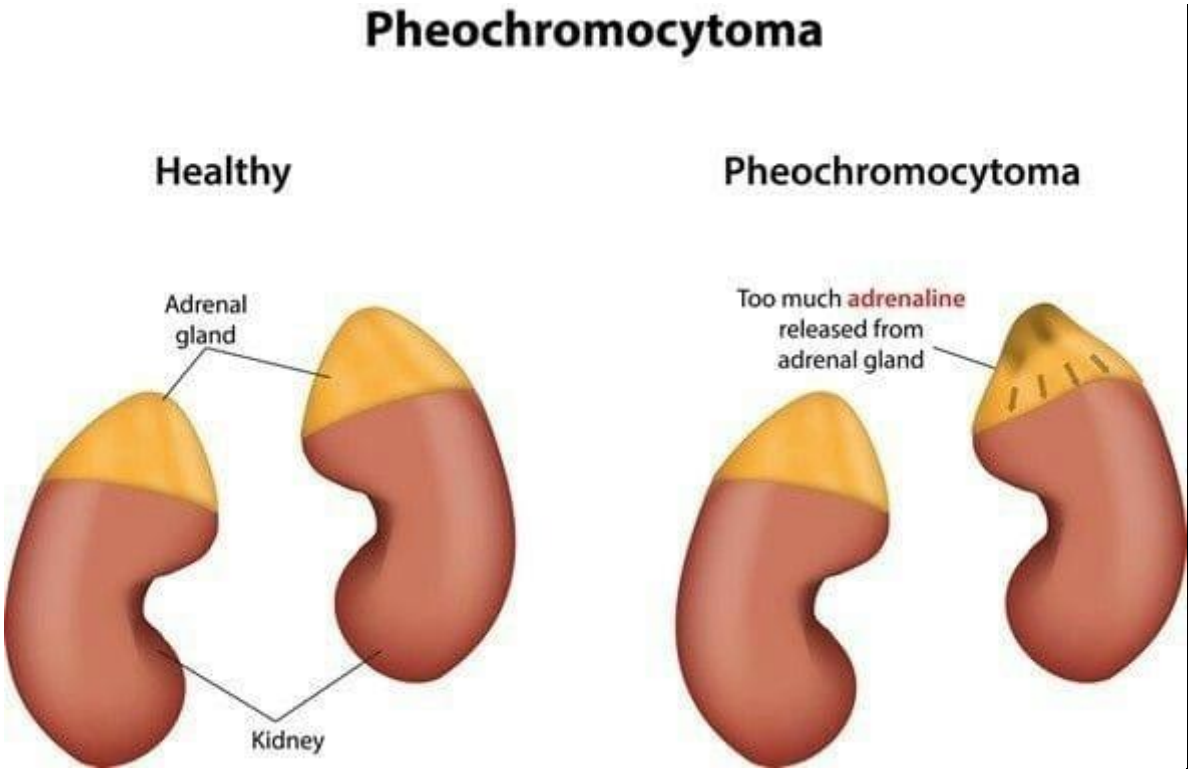
1. **What is pheochromocytoma ?**

- **Tumor of medulla of adrenal gland .**
- **Originate from chromaffine cells along the paravertebral sympathetic chain extend from pelvis to base of skull .**
- **Secret excessive amount adrenalin & nor adrenalin .**
- **%80unilateral .**



2. **What are the main criteria (signs & symptoms) of pheochromocytoma ?**

- **Sever & fluctuated hypertension**
- **Orthostatic hypotension (paroxixmal)**
- **Sever headache**

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- **Perspiration (profound sweating)**
- **Pallor**
- **Palpitation**
- **Nausea & vomiting due to dopamine effect**

3. What are the metabolic signs of pheochromocytoma ?

- **Glugose intolerance (reduce insulin secretion & increase glycogenesis & ketosis)**
- **Polyuria**
- **Lipolysis**
- **Hyperparathyroidism**
- **Hypercalcemia**

what are your management for pheochromocytoma ?
A team of professional cardiologist , anesthesiologist & surgeon .

Preoperative management :
Control the BP by :

- **Combined a & B blockers**
- **Phenobenzamine , selective a 1 blocker (prazosin) a1 > a2 it start 10mg reach to 80 mg or up to 200 mg .**
- **Propanol as B blocker should given beside prazosin to reduce reflex tachycardia .**
- **Ca channel blocker (nicardipine)**
- **Control BP may start 10 _ 14 day before surgery , until no paroxysmal hypotension , no sudden shouting in BP , less catecholamine in serum .**

What is Roizens criteria that mean patient ready to operation

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& under control ?

- **Arterial BP < 160 / 90 at least 48hrs before surgery .**
- **Mild orthostatic hypotension not < 85/ 45**
- **No ST changes in ECG for 2wks before surgery**
- **Not > 1 ventricular ectopic over 5 min.**

What are our anesthetic problems during surgery of pheochromocytoma ?

- **Fluctuation of BP may be sever increase or profound hypotension .**
- **Ventricular ectopic that cant control**
- **During induction smooth deep anesthesia to avoid sympathetic stimulation exaggerated , on intra operatively , mg sulfate is of choice .**
- **During removal of gland sever hypotension ,so normal saline large bore cannula ,vasopressor ephedrine, , dopamine , blood or colloid preparation & given during operation to prevent profound hypotension .**
- **During manipulation by the surgeon to the gland catecholamine release & may cause sudden increase BP , or ventricular ectopic.**
- **Avoid ketamine during induction**
- **Avoid atracurium muscle relaxant because of provoke catecholamine stimulation from the gland .**

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- **Monitoring by invasive intra arterial cathetre for BP , central venous cathetre , capnography , ECG , Spo2**

- **Good analgesia & sedation with benzodiazepine & opioid .**

- **HDU admitting &close monitoring .**

Thank you