

**Hypercortisolism**

1) Exogenous steroid (e.g. txp)
2) Cushing Syndrome
   a) ACTH dependent 80-90%
      i) Pituitary adenoma
      ii) Ectopic (NSC lung cancer, bronchial carcinoid) 10-20%  
   b) ACTH Independent 10-25%
      i) Solitary adrenal adenoma 80-90%
      ii) Diffuse nodular hyperplasia

Clinical - hirsutism, headache, moon facies, depression, buffalo hump

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1 All have bilateral actual hyperplasia
Hyperaldosteronism

1) Primary - Adrenal Neoplasia – decreased rennin
   a) 2 times more in women
   b) 30-50 y/o
   c) 15% cause of hypertension
   d) 60-70% adrenal adenoma
   e) Idiopathic b/l hyperplasia

2) Secondary
   a) Decreased renal perfusion
      i) RAS
      ii) cirrhosis
      iii) CHF
      iv) Pregnancy

Clinical Hallmarks

1) Diastolic hypertension without edema
2) Supplement of plasma renin in face of volume depletion
3) Increased aldosterone despite volume resuscitation

Hyperaldosteronism Suspected (plasma renin concentration)
PRA <1mg/mL/hr
PRA/PAC (plasma aldo concentration) > 30 (&PAC > 20mg/dL)

24hr urine K+ >30mEq

Positive

Adrenal CT
AVS
trial of spironolactone

Aldosterone <14 mg/day
Na > 200mg/day
IV saline load

PAC >10mg/dL

Adrenal adenoma unilateral lesion >1cm
4 times aldosterone gradient with AVS
Good blood pressure with spironolactone

Adrenalectomy

Idiopathic adrenal hyperplasia, bilateral nodularity, <4 times aldosterone gradient with AVS

Spironoactone
**Pheochromocytoma 0.1%**

HA, sweating, tachycardia
b/l - 10% extra adrenal 10%, familial 10%, multicentric 10%, malignant 10%, children 10%

Familial

1) Von Hippel-Lindau
   a) Bilateral
   b) Renal angiomes
   c) Cerebellar hemangioblastoma
2) MEN 2A
   a) Pheochromocytoma (bilateral)
   b) Medullary carcinoma thyroid
   c) Parathyroid hyperplasia
3) MEN 2B
   a) Pheochromocytoma (bilateral)
   b) MTC
   c) Mucosal neuromas
   d) Marfanoid

Symptoms

1) Episodic headache
2) Sweating
3) Tachycardia

Diagnosis

1) Elevation of catecholamines
   a) Serum fractionated metanephrines
   b) Plasma catecholamines
   c) Urine catecholamines & NMA
2) Normal blood pressure or mild HTN with elevated catecholamines
   a) 0.3mg clonodine
      i) Catecholamine <500pg/mL in nl pt, but 0 reduction in pheochromocytoma
3) CT, MRI, MIBG (similar to norepi)

Treatment

1) Phenoxybenzamine (∞ blockade) 2-3 hours prior (post hypotension, tachy, nasal congestion)
2) B blockade after ∞ blockade if tachy
Incidental Adrenal Mass

Plasma fracture metanephrines
1mg dexamethasone supplement
K+, PRA/PAC (if HTN)
Adrenal CT
Adrenal MRI

Functioning
  ▶️ Resection

Non-Functioning
  ≥6 cm suspicious imaging finding
    ▶️ Resection

Non-Functioning
  4-6 cm no susp features
    ▶️ Resection or obs

Non-Functioning
  < 4 cm no susp features
    ▶️ obs

Suspect non-adrenal body imaging, consider FFA

Systemic treatment +/- adrenalectomy