Adrenocorticosteroids = group of agents secreted by the adrenal cortex

Dental uses

Medical Uses

Mechanism of release
stress → hypothalamus releases CRF → pituitary releases ACTH → adrenal cortex releases hydrocortisone

Mechanism of Action
GC binds to receptor → forms steroid-receptor complex
complex translocates through cytoplasm to nucleus
inside nucleus, complex alters gene expression / protein synthesis

Classification of Steroids
- glucocorticoids
- mineralcorticoids

Disease States
Cushing’s Syndrome (adrenal gland tumor, pituitary gland tumor, exogenous corticosteroid)
adrenal insufficiency
- primary: Addison’s Disease (gradual destruction of adrenal cortex - autoimmune, TB)
- secondary: (infection, tumor, surgical removal, disuse atrophy)

Pharmacologic effects
- glucocorticoids
  - anti-inflammatory (palliative - not curative)
    suppress allergic reactions
    suppress immune response
    anti-emetic

- mineralcorticoids
  1. ↑ Na⁺ retention
  2. ↑ K⁺ loss
  3. ↑ edema, hypertension
ADR’s

Glucocorticoids (see fig 18-2, pg 214)
1. metabolic changes
2. infections
3. CNS
4. peptic ulcer
5. impaired wound healing / osteoporosis
6. ophthalmic effects
7. electrolyte / fluid balance
8. adrenal crisis
9. dental effects
   a. slow healing of mucosal surfaces
   b. oral candidiasis with steroid inhalers (common tx for asthma)

Medical Uses
1. replacement therapy
2. autoimmune diseases
   a. rheumatoid arthritis
   b. collagen diseases
3. with chemotherapy in CA tx (anti-emetic/anti-nausea, and to reduce swelling which decreases pain)
4. asthma
5. emergencies - tx shock, tx adrenal crisis
6. tx inflammatory and allergic reactions (palliative only, not curative) (most common)

Dental Uses
1. oral lesions - tx of noninfectious inflammatory diseases / Apthous ulcers (RAS)
2. TMJ
3. oral surgery - ↓ post-op edema, trismus, and pain (?)
4. pulp procedures (?)

Dental Implications
1. GI - stimulate stomach acid, avoid Rx Salicylates (ASA) and NSAID’s
2. check BP - corticosteroids can exacerbate hypertension
3. glaucoma - avoid Rx anticholinergics
4. be aware of possible behavior changes
5. osteoporosis (radiograph)
6. infection - pt. has decreased ability to fight infection, infection symptoms may be masked
7. delayed wound healing - special care in suturing
8. adrenal crisis - only with severe stress
9. periodontal disease - interfere with body’s response to infection, osteoporosis

Steroid supplementation
Most dental patients taking steroids having normal dental tx rendered DO NOT need additional steroids.