NORTHWEST AIDS EDUCATION AND TRAINING CENTER

Care of the Transgender Patient

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Overview

1. Goals and phases of therapy in transgender medicine
2. Prevalence of transgender among HIV infected persons
3. Hormone delivery and monitoring
4. Risks and pitfalls

Prevalence

- Sparse data on the prevalence of HIV infection among transgender population since most surveillance surveys do not distinguish between sex at birth and current sex; excluded from acquisition and transmission trials

- Transgender male to female bear higher burden of prevalence than many populations: 20% prevalence in transgender women worldwide (50-fold increased risk compared to adult male and female ref. populations)

Baral S et al Lancet Infect Dis. 2013 Mar;13(3):214-22

Transgender Care

- Phase 1: **Mental and emotional therapy**
  - Need evaluation by MHP who must clear for hormone tx. Usually requires living as opposite sex **at least 3 months** (real life experiences)
  - Many other mental health conditions often coexist with Gender Identity Disorder (DSM-IV)
  - Require **ongoing** care of MHP

- Phase 2: **Hormone therapy**
  - Goal is to suppress endogenous hormones and maintain desired gender hormones in the physiologic range (not supraphysiologic!)
  - Counseling regarding fertility preservation should be explored prior to tx

- Phase 3: **Surgical therapy**
  - **Minimum of one year** hormone tx first
  - Very costly
  - International clinics lack follow up
  - Still require ongoing hormonal tx

HAART and Transgender Tx

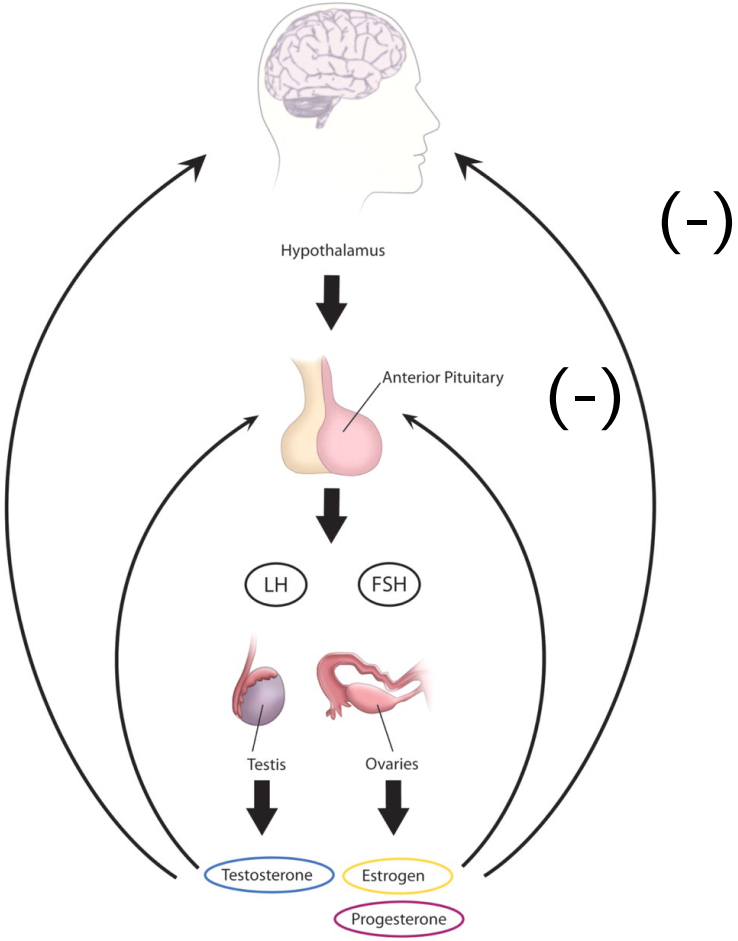
- Almost no studies have examined interaction of drugs
  - Some data suggests hormone concentrations may be slightly less with administration of hormonal contraceptives and HAART but the carry over of these findings to transgender medicine has not been investigated

- Case-control study 60 male to female HIV+ vs. 300 male HIV+ no difference in health status but TG less likely to be on HAART

Melendez R, Am J Public Health. 2006 June; 96(6): 1034–1037.

Sex Steroid Regulation and Exogenous Hormones

GOAL: TRANSGENDER HORMONES IN NORMAL PHYSIOLOGIC RANGE



Treatment of Male to Female TG: Estradiol

- Endocrine Society 2009 Clinical Practice Guideline for Endocrine Treatment of Transexual Persons
  - *Journal of Clinical Endocrinology and Metabolism 94:3132-3154, 2009*

- **CONTRAINDICATIONS:**
  - THROMBOEMBOLIC DISEASE, severe liver dysfunction, breast CA, CAD, CVD, severe migraines, smoking (?)

- **Recommended Tx:**
  - Estradiol Oral 2-6mg/day, Transdermal 0.1-0.4 mg 2x/week, 5-20mg IM/ every other week USE ESTRADIOL (not ethinyl estradiol or synthetic estrogens)
  - ANTI-Estrogen: sprinolactone 100-200 mg/day, DMPA 150 mg/3 months, flutamide not very effective
  - GnRH agonist/antagonist: Lupron 3.75 sc/month

Treatment of Male to Female TG

- **EXPECTATIONS:**
  - Male to Female longer to see effects, less satisfied
  - 6 months: decreased facial hair, some breast growth
  - 2 years: maximal breast growth
  - 1-2 years: testicular atrophy
  - F/up labs every 3 months x 1 year, then 2x year: favor use of estrogen, not synthetic nor conjugated estrogen as cannot measure blood levels(goal > 50 < 200 pg/ml) and castrate T levels, LFT and K if on spironolactone
  - DO NOT DOSE ESCALATE. Add anti-androgen

- **RISKS:**
  - THROMBOEMBOLIC DISEASE: 2-10x risk DVT, transdermal lower risk (smoker?)
  - CVD: increased risk?
  - HCT: no issues
  - Decreased libido
  - Consider breast cancer screening after 2-3 years if > 50 yo

Treatment of Female to Male TG

- Endocrine Society 2009 Clinical Practice Guideline for Endocrine Treatment of Transexual Persons
    - *Journal of Clinical Endocrinology and Metabolism 94:3132-3154, 2009*

- **CONTRAINDICATIONS:**
    - Breast or uterine CA, HCT > 50, severe liver disease

- **Recommended Tx:**
    - Testosterone: (IM every 2 weeks, gels, patches NOT ORAL) goal 350-1000 ng/ml
        - Can add progesterone if continue menses, DepoProvera, GnRH agonist

Treatment of Female to Male TG

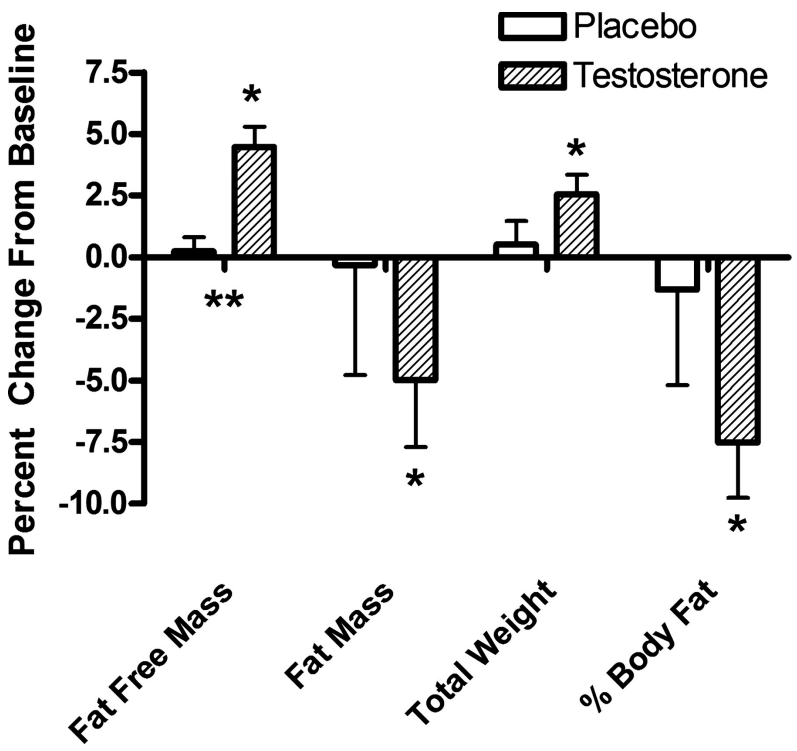
- **EXPECTATIONS:**
  - Androgens will increase lean mass, strength, body hair, libido and HCT and will decrease fat mass.
  - Physical changes after about 3 months, including menses cessation
  - Voice lowering and clitormegaly 1 year.
  - Follow up labs: q3months including HCT x 1 year then 2x/year
  - STILL NEED PAP SMEARS + Breast cancer screening

- **RISKS:**
  - Erythrocytosis
  - Unclear effects on CVD risk
  - Acne
  - Increase insulin resistance?

Summary

- Likely very high prevalence of HIV among transgender population. Consider transgender a RF for HIV. More research needed on this at risk population.
- No evidence TG hormones interfere with HAART.
- Male to female TG: takes longer
  - Estradiol + anti-androgen
  - DVT risk
- Female to male TG:
  - Testosterone
  - Paps smears
- Hormone levels **target normal range, manage expectations**, MHP

Testosterone as an Anabolic Agent in HIV



- 3x supraphysiologic T given to HIV+ men with unintentional wt. loss
- NO INCREASE vs. PLACEBO in strength, mood, stair climb
- No adverse events

Bhansin S et al Am J Physiol 2008

Options for Testosterone Administration

- Depot formulations
  - Intramuscular (q2week)
  - Subcutaneous implant
- Daily dosing
  - Transdermal ($$)
  - Buccal
  - Oral
- Follow-up (3-6 months)
  - HC

Sex Steroid Effects