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)

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

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

- **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: spiroloactone 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
Options for Testosterone Administration

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

**Testosterone: Target Organs**

- **Skin**
  - Hair growth,
  - Balding, sebum
  - Production

- **Liver**
  - Synthesis of serum proteins

- **Male Sexual Organs**
  - Penile growth
  - Spermatogenesis
  - Prostate growth and function

- **Brain**
  - Libido, mood

- **Muscle**
  - Increase in strength and volume

- **Kidney**
  - Stimulation of erythropoietin production

- **Bone Marrow**
  - Stimulation of stem cells

- **Bone**
  - Accelerated linear growth
  - Closure of epiphyses