Gender Affirming Therapy: Women (MtF)

Equal Access LGBT Health Clinic at Eastside

Developed by Catherine Bielick, 2017-2018 Clinic Director, updated 2019 by Patrick Bliven, 2019-2020 Clinic Director

Initial evaluation in clinic → Patient visits and obtains letter from free therapy night → Patient obtains baseline labs → Begin HRT after discussion of risks and benefits → Reevaluation at 3 months (with labs prior) → Reevaluation at 6 months (with labs prior) → Reevaluation at 12 months (with labs prior)

Initial Evaluation

- Baseline history and counseling
  - Mood status (PHQ-9, GAD6, Mood Disorder Questionnaire)
  - Suicidal ideation
  - Smoking status & other VTE/hypercoagulable risk factors
  - Desire for fertility – counsel on fertility options
- Set **expectations** for what changes to expect from GAT (reference)
  - Body fat redistribution; 3-6 months; 2-5 years
  - Decreased muscle mass/strength; 3-6 months; 1-2 years
  - Softening of skin/decreased oiliness; 3-6 months; unknown
  - Decreased libido; 1-3 months; 3-6 months
  - Decreased spontaneous erections; 1-3 months; 3-6 months
  - Male sexual dysfunction; variable; variable
  - Breast Growth; 3-6 months; 2-3 years
  - Decreased testicular volume; 3-6 months; 2-3 years
  - Decreased sperm production; variable; variable
  - Thinning and slowed growth of body and facial hair; 6-12 months; >3 years
  - Male pattern baldness; no regrowth, loss tops 1-3 months; 1-2 years
- Absolute Contraindications: any active estrogen-sensitive cancer
- Complete Informed Consent Form & Upload to patient chart
- Enroll patient in Gender Affirming Therapy in the Clinic Navigator

Therapeutic Options

Estrogen – administer FIRST [36]

- Bioidentical Estradiol Oral/Sublingual (*most typical*)
  - Initial: 2-4 mg/day
  - Maximum: 8 mg/day (BID dosing if >2 mg daily)

Others:

- Estradiol Transdermal (lower or absent clotting risk [35])
- Initial 100 mcg per [timing brand/product-dependent]
- Maximum 100-400 mcg per timing brand/product
- Estradiol valerate IM: Initial 20 mg IM q 2wk; Max 40mg IM q 2wk
- Estradiol cypionate IM: Initial 2 mg IM q 2wk; Max 5 mg IM q 2 wk
- Note: Conjugated equine estrogens (Premarin) are no longer recommended due to high risk of thrombogenicity and cardiovascular risk [38,39]

Androgen Blocker – Administer SECOND [32,36] –

- Spironolactone: Initial: 50 mg BID,Max: 200 mg BID

Optional Adjuncts (for reference)

- Finasteride 1-5 mg/day depending on desired effect
- Dutasteride 0.5 mg/day
- Progestagen
  - Micronized progesterone 100-200 mg/night
  - Medroxyprogesterone acetate (Provera), less preferred
    - Initial 2.5 mg/night; Max 10 mg/night

Estrogen Treatment Risks

Venous Thromboembolism

- VTE background rate in general pop: (1/1,000-1/10,000)
- Data on risk of oral 17-Beta estradiol (bioidentical) is MIXED – Some = no increased risk [49]
  - Some = 2.5-4 fold increase in relative risk (still low absolute risk) [50,51]
- Often quoted study: [52,53] Found 20-40-fold times risk of VTE in transgender women, BUT:
  - 1) high doses (100-200 mcg/day)
  - 2) thrombogenic ethinyl estradiol (conjugated) used and
  - 3) Mix of smokers and non-smokers in cohort
- Routine hypercoagulability screening is not recommended
- Withhold estrogen therapy when: 1) patients with significant risk factors/history of VTE and 2) who continue to smoke tobacco
- If risks are great, but manageable—consider transdermal estrogen application

Loss of erectile function

- Some do not lose, can be safely preserved with Viagra or Cialis

Libido loss

- 22% met criteria for Hypoactive Sexual Desire Disorder (HSDD), no correlation with testosterone levels [59]
- Mental health therapy – continue throughout treatment to help with body image issues and dissociative symptoms

Prolactinoma [56]

- Few case reports reporting association with estrogen therapy
- Prolactin levels should only be checked in cases of
  - Visual disturbance, Excessive galactorrhea, New onset headaches

Migraine

- Estrogen known association with menstrual migraines (by period cycle in non-transgender women)
- May be exacerbated with feminizing GAT

Infertility

- Sperm cryopreservation may be required

Labs *Baseline & Prior to Every Visit*

- Serum Estradiol (NOT TOTAL estradiol)
- Serum TOTAL testosterone LC/MS/MS

(free testosterone is unreliable [33])

- CMP (to include BMP & albumin)

Goals: Titrate GAT dosing to the physiologic range of non-transgender individual of identified gender

(levels vary by lab – Quest lab ranges listed)

- Physiologic range of mid-cycle non-transgender female
  - Estradiol = 64-357 pg/mL (test code 4021 – can google to order)
  - Total Testosterone = 2-45 ng/dL (test code 15983)

No evidence to support extra monitoring: lipids, A1c/glucose, cholesterol

Other Health Concerns

Prostate Exams: follow current guidelines, prostatic atrophy may be severe if on finasteride

Hernias: If pre-operative SRS – MUST monitor – tucking genitals can cause hernias or perineal skin breakdown

If post-operative SRS and needs vaginal exam – NO cervix or fornices – pap smears unnecessary (/impossible)

Visualization of tissue may be better with an anoscope (if necessary, EAC would need WeCare referral)

Gender Affirming Therapy: Men (FtM)

Equal Access LGBT Health Clinic at Eastside

Developed by Catherine Bielick, 2017-2018 Clinic Director, updated 2019 by Patrick Bliven, 2019-2020 Clinic Director

Initial evaluation in clinic → Patient visits and obtains letter from free therapy night → Patient obtains baseline labs → Begin HRT after discussion of risks and benefits → Reevaluation at 3 months (with labs prior) → Reevaluation at 6 months (with labs prior) → Reevaluation at 12 months (with labs prior)

Initial Evaluation

- Baseline history and counseling
  - Mood status (PHQ-9, GAD6, Mood Disorder Questionnaire)
  - Suicidal ideation
  - Smoking status & other VTE/hypercoagulable risk factors
  - Desire for fertility – counsel on fertility options
- Set **expectations** for what changes to expect from GAT (reference)
  - Skin oiliness; 1-6 months; 1-2 years
  - Facial/body hair growth; 3-6 months; 3-5 years
  - Scalp hair loss; >12 months; variable
  - Increased muscle mass/strength; 6-12 months; 2-5 years
  - Body fat redistribution; 3-6 months; 2-5 years
  - Cessation of menses; 2-6 months; n/a
  - Clitoral enlargement; 3-6 months; 1-2 years
  - Vaginal atrophy; 3-6 months; 1-2 years
  - Deepened voice 3-12 months; 1-2 years
- Absolute Contraindications: any active estrogen-sensitive cancer
- Complete Informed Consent Form & Upload to patient chart
- Enroll patient in Gender Affirming Therapy in the Clinic Navigator

Therapeutic Options

Testosterone Cypionate IM or SQ:
- Initial 50 mg/wk; Max 100 mg/wk

•Can double each dose for q 2-week dosing

Others (for reference)
- Testosterone Enthanate IM or SQ: Initial 50 mg/wk; Max 100 mg/wk
- Testosterone topical gel 1%: Initial 50 mg qAM; Max 100 mg qAM
- Testosterone topical gel 1.62%: 40.5-60.75mg qAM; Max 103.25mg qAM
- Testosterone Patch: Initial 4 mg qPM; Max 8 mg qPM
- Testosterone cream: initial 50 mg, Max 100 mg
- Testosterone Axillary gel 2%: Initial 60 mg qAM; Max 90-120 mg qAM
- Testosterone Udecanoate: Initial 750 IM repeat in 4 weeks, q 10 weeks

Testosterone Treatment Risks

Erythrocytosis/polycythemia

•Use reference male range

Management of polycythemia

1)Check testosterone levels, including peak levels – adjust dose

2)More frequent injection schedule with lower peak dose may lower risk [59]

3) Phlebotomy or blood donation short term solution

4)Rule out pathologic causes of polycythemia (OSA, tobacco, etc)

Hair Loss
- Fronto-temporal pattern, severity based on genetics

Management
- OTC Minoxidil (Rogaine)
- 5-alpha reductase inhibitors (finasteride/dutasteride)
- Surgical approaches – scalp advancement, hair transplantation

Acne
- Peaks in first year of testosterone therapy then declines
- Treat as normal with topical skin treatments escalating with severity

Weight gain
- Must use with caution and informed consent with PCOS, obese, or hyperlipidemic patients

Labs *Baseline & Prior to Every Visit*

- CBC without diff (Hg and Hct for erythropoietic effect)
- Serum Estradiol (not total estradiol)
- Serum Total Testosterone LC/MS/MS (free testosterone unreliable [33]
- Serum Albumin
- No evidence to support extra monitoring: lipids, A1c/glucose, cholesterol

Goals
- Titrate GAT dosing to the physiologic range of non-transgender individual of identified gender

(levels vary by lab – Quest lab ranges listed)

Physiologic range of non-transgender males ≥18yo
- Total Testosterone = 250-1100 ng/dL (test code 15983)
- Serum Estradiol = can vary greatly – not great priority
  - Only 29% of 31 trans men achieved physiologic male-range estradiol levels

Health Maintenance

Pap smears: follow USPSTF, likely behind, based on age
- Can be traumatizing – "checkitoutguys.ca" is good patient resources for FTM's
- MUCH higher rate of inadequate cytologic sampling (possibly due to rushing procedure from patient discomfort)[31]
- Can pre-medicate with vaginal estrogens 1-2 weeks prior to exam to decrease vaginal atrophy due to testosterone therapy
- If still refuses – offer external OR bimanual as initial step towards establishing trust