GENDER DYSPHORIA: CARING FOR TRANSGENDER AND GENDER NON-BINARY PATIENTS

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LEARNING OBJECTIVES

- Define gender dysphoria, transgender, and gender nonbinary
- State current medication therapy options for gender dysphoria
- Discuss risks and benefits of treatment for gender dysphoria
- Identify opportunities to provide gender-affirming care to transgender and gender nonbinary patients

TERMINOLOGY

Sex: Assigned based on external genitalia
Gender: Assigned based on an internal sense of self and how one fits into society
Cisgender
- Identifies with same gender as the sex assigned at birth
Transgender
- Identifies with opposite gender than the sex assigned at birth
Gender Nonbinary
- Gender which does not fit as male or female
- Spectrum

TERMINOLOGY

Gender Dysphoria
- DSM-V diagnosis
- Discomfort, distress OR functional impairment caused by incongruence between sex assigned at birth and affirmed gender

Common questions
- Why does this condition require treatment?
- What if I don’t understand being transgender?
GENDER PRONOUNS

How would you address this patient?
What pronoun would you use?

Use pronouns based on patient preference
- Female: she/her
- Male: he/him
- Gender neutral: they/them (can be used as singular)
- Gender neutral: ze/hir

Patients may identify as one gender but not yet ready to use pronouns for that gender
Periodically ask and check to make sure the patient is still using the pronouns you are using

Electronic Medical Records (EMR) and systems of care
- Determine how to record sex assigned at birth and affirmed gender

THE NUMBER OF PATIENTS SEEKING CARE FOR GENDER DYSPHORIA IS:

A) Decreasing
B) Staying constant
C) Increasing

PREVALENCE: 2016 ESTIMATES

- Nationwide
  - ~1,400,000 people identify as TGNB
  - 0.58%

US TRANSGENDER SURVEY REPORT

Online survey completed by 27,715 transgender people in the US
• 1 out of 10 who came out experience physical violence by a family member
• 23% don’t engage in medical care due to fear of mistreatment
• 25% have problems with insurance related to bring transgender
• 30% live in poverty (entire US population: 14%)
• 41% have attempted suicide in their lifetime (entire US population: 4.6%)
• 1.4% are HIV+ (entire US population 0.3%)


TREATMENTS FOR GENDER DYSPHORIA

• Social Transition
• Psychotherapy
• Hormone therapy
• Surgery
• Voice training
• Electrolysis

STEP 2: IDENTIFY TREATMENT OPTIONS FOR PATIENTS

Therapy for Gender Dysphoria

FEMINIZING HORMONE THERAPY

Goals
• Induce physical changes that are more congruent with gender identity
• Individualize a treatment regimen based on patient goals
• Non-binary, genderqueer, or gender diverse goals
• Suppress/minimize male secondary sex characteristics
• Develop female secondary sex characteristics

General Approach
• Androgen blocker + Estrogen (ethinyl estradiol)

ANTI-ANDROGENS

Spironolactone
MOA: directly inhibits testosterone synthesis and binding to the androgen receptor
Dose: 100–400mg/day
Side effects: Hyperkalemia, dehydration, nocturia, arthralgias

Gonadotropin Releasing Hormone (GnRH) Analogues
MOA: Binds to the GnRH receptor, inhibiting the pulsatile activity of FSH and LH at the level of the pituitary
Dosed monthly or yearly
Injectable, expensive
Side effects: Injection site, effects on bone mass and growth

ESTROGEN FORMULATIONS

17 beta-estradiol
Conjugated equine estrogens (Premarin)
• Inability to accurately measure blood levels
• Potential of increased thrombotic and cardiovascular risk
• Ethical concerns about methods of production

Ethinyl estradiol
• Synthetic estrogen, commonly used in oral contraceptives
• Associated with increased thrombotic risk

Deutsch MB et al. Guidelines for the Primary and Gender-Affirming Care of Transgender and Gender Nonbinary People; 2nd edition. 2016.
**ESTROGEN FORMULATIONS**

- **Oral**
  - 17-beta estradiol (premarin)
  - Noretinot and norethisterone administration
  - Dose: 2-3 mg/day

- **Transdermal**
  - Estradiol
  - Transdermal patches
  - Compounded creams
  - Dose: 0.1-0.5 mg/24 hour inter weekly

- **Parenteral (IM)**
  - Estradiol valerate or cypionate
  - Buiaty used
  - Dose: 20-80mg monthly

**Guidelines for the Primary and Gender Affirming Care of Transgender and Gender Nonbinary People. 2nd edition. Deutsch MB, ed. June 2016.**

**FEMINIZING HORMONE EFFECTS**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Expected Onset</th>
<th>Expected Maximum Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female secondary sex characteristics (desired enhancement)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body fat redistribution</td>
<td>3-6 months</td>
<td>2-5 years</td>
</tr>
<tr>
<td>Breast growth</td>
<td>3-6 months</td>
<td>2-3 years</td>
</tr>
<tr>
<td>Softening of skin/decreased oiliness</td>
<td>3-6 months</td>
<td>unknown</td>
</tr>
<tr>
<td>Male secondary sex characteristics (desired repression)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decreased spontaneous erections</td>
<td>1-3 months</td>
<td>3-6 months</td>
</tr>
<tr>
<td>Decreased muscle mass/strength</td>
<td>3-6 months</td>
<td>1-2 years</td>
</tr>
<tr>
<td>Decreased testicular volume/impotence</td>
<td>3-6 months</td>
<td>2-3 years</td>
</tr>
</tbody>
</table>

**Adverse effects**

- Nausea, vomiting, loss of sex drive 1-2 months
- Decreased libido/sexual dysfunction 1-2 years

**SIDE EFFECTS OF ESTROGEN**

- Hot flashes
- Mood swings
- Migraines
- Weight gain

**VENOUS THROMBOEMBOLISM (VTE)**

- Oral ethinyl estradiol 2-6% incidence of VTE in transgender women, no increased risk with other formulations.
- Transdermal estrogen administration showed no increased risk in observational studies of menopausal cisgender women.

**SIDE EFFECTS OF ESTROGEN**

- Hypertriglyceridemia

**MASCULINIZING HORMONE THERAPY**

- **Goals**
  - To develop male secondary sex characteristics
  - To suppress/minimize female secondary sex characteristics

- **General approach**
  - Testosterone monotherapy

**TESTOSTERONE FORMULATIONS**

- **Injectable**
  - Cypionate, Decanoate, Propionate esters
  - Intramuscular or Subcutaneous
  - Administered Q 1-2 weeks
  - Dose: 20-100mg/week

- **Transdermal**
  - Patch (Androderm), dose: 2-8mg applied QHS
  - Gel (Androgel), dose: 12.5-100mg applied QAM

- **Subcutaneous implant**
  - Testopel

**MASCULINIZING HORMONES**

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<tbody>
<tr>
<td>Male secondary sex characteristics (desired enhancement)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facial/body hair growth</td>
<td>3-6 months</td>
<td>3-5 years</td>
</tr>
<tr>
<td>Increased muscle mass/strength</td>
<td>6-12 months</td>
<td>2-3 years</td>
</tr>
<tr>
<td>Deepened voice</td>
<td>3-6 months</td>
<td>1-2 years</td>
</tr>
<tr>
<td>Body fat redistribution</td>
<td>3-6 months</td>
<td>2-5 years</td>
</tr>
<tr>
<td>Female secondary sex characteristics (desired repression)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss of menses</td>
<td>3-6 months</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Adverse Effects**

- Clitoral enlargement 3-6 months 1-2 years
- Virilization 3-6 months 1-2 years
- Increased skin oiliness/acne 3-6 months 1-2 years
- Body hair loss 3-6 months variable

**GARTHERM” AND “FEMINIZATION” HORMONES**

- Estradiol (oral, patch)
  - Dose: 2-6 mg/day
  - Dose: 2-8 mg applied QHS
  - Dose: 12.5-100 mg applied QAM

- Testosterone (injectable, transdermal, subcutaneous)
  - Dose: 20-100 mg/week
  - Dose: 2-8 mg applied QHS
  - Dose: 12.5-100 mg applied QAM

**Guidelines for the Primary and Gender Affirming Care of Transgender and Gender Nonbinary People. 2nd edition. Deutsch MB, ed. June 2016.**
SIDE EFFECTS OF TESTOSTERONE

Polycythemia
- Transdermal administration may have less effect

Weight gain

Increase in visceral fat

RISK VS. BENEFIT

Risks of therapy
- VTE, weight gain, sexual dysfunction, (estrogen therapy)
- Infertility, acne, lipid changes, hepatic dysfunction (testosterone therapy)

Benefit of therapy
- Preventing suicide

STEP 3: BE A PART OF THE REVOLUTION

Improving Care for Patients

PHARMACOLOGIC THERAPY

Medication Education
- Risks and precautions
- Timelines of physical outcomes
- Patient’s expectations and goals
- Different formulations

Medication Acquisition
- Helping the team with prior authorizations
- Identify compounding pharmacies that offer lower priced options

PHARMACY SERVICES

- Smoking cessation
- Cholesterol management
- Obesity
- HIV prevention counseling and testing

BE AN ALLEY

TGNB cultural competency
- Learn yourself
- Train staff

Create a gender affirming setting
- De-gender language
- Post written non-discrimination policy
- Gender neutral bathrooms
RESOURCES

- World Professional Association for Transgender Health (WPATH.org)
- The Endocrine Society Guidelines
- Fenway National LGBTQ Health Education Center
- UCSF Center of Excellence for Transgender Health