SESSION K4

Medical Management of Transgender Youth
David Breland, MD, MPH

Session Description:

Transgender youth face many challenges such as high rates of depression, substance abuse and increased rates of STI acquisition partly due to social stigma and gender dysphoria. There is some evidence that allowing these young people to transition into their desired gender can help alleviate some of the psychosocial issues by treating the gender dysphoria. APNs will encounter transgendered youth in practice; therefore it is imperative to understand current recommendations for treatment in these youth. During this talk, illustrative cases will be discussed.

Learning Objectives:

Following my presentation, participants will be able to:
1. Have knowledge of the DSM IV criteria for gender dysphoria.
2. Describe the psychological issues related to gender dysphoria.
3. Discuss the standards of care for Transgender youth.
Caring for Transgender Youth

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Objectives

• Prevalence
• DSM V criteria of Gender dysphoria
• Psychological considerations
• Medical management

DSM-V Criteria – Gender dysphoria (302.6)

A. 6 months duration, as manifested by 2 or more of the following:
1. Marked incongruence between expressed/experience gender and 1 or 2 sex characteristics
2. Strong desire to be rid of one 1 or 2 sex characteristics
3. Strong desire to have 1 or 2 sex characteristics of other gender
4. Strong desire to be of the other gender (alternative gender)
5. Strong desire to be treated as other gender
6. Strong conviction that one has the typical feelings and reactions of other gender

DSM-V Criteria – Gender Dysphoria

B. Associated with clinically significant distress/impairment in social, occupational, or other important areas of functioning.

Subtypes
• With a disorder of sex development
• Without a disorder of sexual development

Specifier
• Post-transition

DSM-5 Gender dysphoria

• Aims to avoid stigma
• Ensure clinical care
• Critical element is the presence of significant distress
• In children desire present and verbalized
• Post-transition specifier
  • Could potentially help with continued insurance coverage of medical services

What happens when one's gender identity is incongruent with one's biological sex?

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Psychological Profile of Children and Adolescents with Gender Dysphoria

- Symptoms of depression and anxiety
- Social isolation and rejection
- Low self-esteem/self-worth
- Self-harming behaviors
- Suicidality
- Perception of being completely misunderstood and alone
- Autism/Asperger’s?

Psychological Evaluation

- International protocol, modeled after Dutch clinic
  - Comprehensive clinical interview with patient and parents (approx 4 hours)
  - Battery of psychosocial measures
  - Battery of gender identity measures

Prevalence of gender dysphoria

- MTF 1/12,000; FTM 1/30,000 (Netherlands)
- Perhaps as high as 1/1,000-2,000
- Ratio MTF:FTM 3:1 in adults, 1:1 in teens,
  - 3-6:1 in prepubertal
- More MTFs with “late-onset” gender dysphoria

Beginning Treatment

- Assess readiness for transition
  - Physical (Tanner stage)
  - Psychological
  - Social
- Review risks and benefits of pubertal suppression and hormone therapy
  - Irreversible physical changes
  - Fertility
  - Metabolic changes

Beginning Treatment

- Obtain informed consent
- Establish reasonable expectations
- Order screening labs
- Provide referrals
- Establish follow up

Medical Conditions exacerbated by cross-sex hormone therapy

<table>
<thead>
<tr>
<th>MTF</th>
<th>FTM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thromboembolic disease</td>
<td>Breast or uterine CA</td>
</tr>
<tr>
<td>Macroprolactinoma</td>
<td>Severe liver dysfunction</td>
</tr>
<tr>
<td>Severe liver dysfunction</td>
<td>Breast CA</td>
</tr>
<tr>
<td>Breast CA</td>
<td>CAD</td>
</tr>
<tr>
<td>CAD</td>
<td>CVD</td>
</tr>
<tr>
<td>CVD</td>
<td>Severe migraines</td>
</tr>
</tbody>
</table>
Guidelines for Treatment of GD

Endocrine Society

- Suppression of puberty at Tanner stage 2
- Treatment for youth < 16 with GnRH analogues
- Followed by cross gender hormone therapy age 16

Pubertal suppression: GnRH analogs

Lupron Depot®
- 7.5 mg IM every 4 weeks
- 5% risk of local reaction
- ? Use of 3- and 4- monthly formulations
- Can be continued for a few years used alone
- Can be stopped when on cross hormones

GnRH analogs: Supprelin LA® (Histrelin)

GnRH analogs: what they do

- Slows/cessation of:
  - Pubertal development
  - Linear growth, bony changes of puberty
  - Androgen-dependent hair growth
  - Deepening of the voice, enlargement of larynx
  - Libido

GnRH analogs: what they may do

- Provide relief of GID
- Improve psychological/physical outcomes
- Increase adult height in FTMs; decrease in MTFs
- Cause hot flashes and first period in FTMs
GnRH analogs: what they don’t do

- Fulling developed MTFs, doesn’t cause regression in:
  - Penis, beard, body hair, Adam’s apple, shoulders, jaw
- Fully developed FTMs, doesn’t cause regression in:
  - Breast
  - Hips

GnRH analogs: cost

- Lupron-Depot® (leuprolide)
  - US$ 12,000-15,000/year
  - Longer-acting forms may be cheaper
- Supprelin LA® implant (histrelin)
  - US$ 15,000/year + surgical fees

Follow-up for pubertal blockers

- Every 3 months
  - Ht, wt, sitting Ht, Tanner stage
  - LH, FSH, estradiol/testosterone
- Every year
  - Renal and liver function, lipids, glucose, insulin, Hgb A1C
  - Bone age on x-ray of the left hand

Anti-androgens

- Block T synthesis, action, conversion to DHT
  - Spironolactone (Aldactone, generic)
  - Cyproterone (Euflex)
  - Finasteride (Propecia, Proscar)
- Used to block the effects of androgens on the hair follicles
- Used if not taking GnRH analog
- Each has its own benefits and side-effects

Spironolactone

- Fully reversible
- Dose: 100 mg -200 mg/day
- Cost: $15/month
- Gynecomastia!!!!
- Can cause hyperkalemia
- Patients must be counselled about d/c with vomiting

Menstrual suppression

- Done when periods are major stressor
- Much cheaper than Lupron Depot
- No menopausal symptoms
- Can use:
  - Continuous OCPs
  - Extended-cycle OCPs (i.e. Seasonale®)
  - Depot medroxyprogesterone (Depo-Provera)
Cross-sex Hormones: MTF

<table>
<thead>
<tr>
<th>Estrogen</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral: estradiol</td>
<td>2.0-6.0 mg/d</td>
</tr>
<tr>
<td>Transdermal: estradiol patch</td>
<td>0.1-0.4 mg twice weekly</td>
</tr>
<tr>
<td>Parenteral: estradiol valerate or cypionate</td>
<td>5.00-10.0 mg IM every 2 wks</td>
</tr>
<tr>
<td>Androgens</td>
<td></td>
</tr>
<tr>
<td>Spironolactone</td>
<td>100-200 mg/d</td>
</tr>
<tr>
<td>Cyproterone acetate a</td>
<td>50-100 mg/d</td>
</tr>
</tbody>
</table>

* Not available in the United States

Hembree et al J Clin Endocrinol Metab. Sept. 2009

Monitoring: MTF

1. 2-3 months first yr then 1-2 times a year.
2. Testosterone and estrogen: baseline and every 3 months. (<55 ng/dl; <200 pg/ml).
3. Prolactin: baseline, annually then biannually.
4. Spironolactone: lytes annually then every 2-3 months in first yr.

Cross-sex Hormones: FTM

<table>
<thead>
<tr>
<th>Testosterone</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral:</td>
<td></td>
</tr>
<tr>
<td>Testosterone undecanoate</td>
<td>160-240 mg/d</td>
</tr>
<tr>
<td>Parenteral:</td>
<td></td>
</tr>
<tr>
<td>Testosterone enanthate or cypionate</td>
<td>100-200 mg IM every 2 wk or 50% weekly</td>
</tr>
<tr>
<td>Testosterone undecanoate a</td>
<td>1000 mg every 12 wks</td>
</tr>
<tr>
<td>Transdermal:</td>
<td></td>
</tr>
<tr>
<td>Testosterone gel 1%</td>
<td>2.5-10 g/d</td>
</tr>
<tr>
<td>Testosterone patch</td>
<td>2.5-7.5 mg/d</td>
</tr>
</tbody>
</table>

* Not available in the United States

Hembree et al J Clin Endocrinol Metab. Sept. 2009

Monitoring: FTM

- 2-3 months in first yr then 1-2 times per yr.
- Testosterone baseline then every 2-3 months—physiological male range.
- Estrogen first 6 months or no uterine bleeding for 6 months. (<50 pg/ml).
- CBC and LFTs every 3 months first yr then 1-2 times a yr.
- Annual pap per recommendations

Feminizing effects in MTF

<table>
<thead>
<tr>
<th>Effect</th>
<th>Onset</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redistribution of body fat</td>
<td>3-6 months</td>
<td>2-3 yrs</td>
</tr>
<tr>
<td>↓ in muscle mass</td>
<td>3-6 months</td>
<td>1-2 yrs</td>
</tr>
<tr>
<td>Softening of skin; oiliness</td>
<td>3-6 months</td>
<td>unknown</td>
</tr>
<tr>
<td>↓ libido</td>
<td>1-3 months</td>
<td>3-6 months</td>
</tr>
<tr>
<td>↓ spontaneous erections</td>
<td>1-3 months</td>
<td>3-6 months</td>
</tr>
<tr>
<td>Male sexual dysfunction</td>
<td>Variable</td>
<td>Variable</td>
</tr>
<tr>
<td>Breast growth</td>
<td>3-6 months</td>
<td>2-3 yrs</td>
</tr>
<tr>
<td>↓ testicular volume</td>
<td>3-6 months</td>
<td>2-3 yrs</td>
</tr>
<tr>
<td>↓ sperm production</td>
<td>Unknown</td>
<td>&gt;3 yrs</td>
</tr>
<tr>
<td>↓ terminal hair growth</td>
<td>6-12 months</td>
<td>&gt;3 yrs</td>
</tr>
<tr>
<td>Scalp hair</td>
<td>No regrowth</td>
<td>Familial</td>
</tr>
<tr>
<td>Voice changes</td>
<td>none</td>
<td>Speech tx</td>
</tr>
</tbody>
</table>

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Masculinizing effects in FTM

<table>
<thead>
<tr>
<th>Effects</th>
<th>Onset (months)</th>
<th>Maximum (yrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin oiliness/ acne</td>
<td>1-6</td>
<td>1-2</td>
</tr>
<tr>
<td>Facial/body hair growth</td>
<td>6-12</td>
<td>4-5</td>
</tr>
<tr>
<td>Scalp hair loss</td>
<td>6-12</td>
<td>n/a</td>
</tr>
<tr>
<td>Increased muscle mass</td>
<td>6-12</td>
<td>2-5</td>
</tr>
<tr>
<td>Fat redistribution</td>
<td>1-6</td>
<td>2-5</td>
</tr>
<tr>
<td>Cessation of menses</td>
<td>2-6</td>
<td></td>
</tr>
<tr>
<td>Clitoral enlargement</td>
<td>3-6</td>
<td>1-2</td>
</tr>
<tr>
<td>Vaginal atrophy</td>
<td>3-6</td>
<td>1-2</td>
</tr>
<tr>
<td>Deepening of voice</td>
<td>6-12</td>
<td>1-2</td>
</tr>
</tbody>
</table>

Hembree et al J Clin Endocrinol Metab. Sept. 2009
Health Care Maintenance: Trans Youth

- STI screening and treatment based on anatomy and behaviors
- CT screening annually
- Screen for HIV and Syphilis when sex with MSM
- FTMs and continued fertility
- MTFs and fertility
- Required ongoing therapy with a MHP
- Transition of care to adult provider

Create a Trans-Friendly Environment

- Staff training
- Use of preferred pronoun and name
- Visible non-discrimination policy
- Transgender inclusive health literature
- Unisex/Individual bathrooms
- Respect confidentiality, don’t ‘out’

Cases

Case 1 Kevin

- K is a 13 year-old natal male brought in by mom for consultation
- K identifies as female but gender expression is still male
- K is distressed by onset of puberty; desires to transition to female

Case 1 Continued

- A 13 year-old natal male brought in by mom for consultation
- Identifies as female but gender expression is still male
- Is distressed by onset of puberty; desires to transition to female
- What do you do next?

Initial Assessment

- Establish privacy
  - Ask mom to step out of room
  - Explain what can (can’t) be kept confidential
- Establish trust and rapport
  - Ask name and preferred pronoun
  - Ask goals of visit
- General adolescent health assessment
  - HEADDSSS
Case 1 Update

- You refer K to a mental health provider and a health care provider that should have expertise in transgender care.

Transgender and Mental Health

- Identifying as transgender is not in itself a mental health disorder
- Social stigma is a problem
  - Familial rejection
  - Social isolation (friends, dating)
  - Fear of physical attacks
- Mental health concerns for transgendered
  - Depression
  - Suicidality
  - Body image issues
  - Substance abuse

Guidelines for Treatment of GD

- Endocrine Society
  - Suppression of puberty at Tanner stage 2
  - Treatment for youth < 16 with GnRH analogues
  - Followed by cross gender hormone therapy age 16
- World Professional Association for Transgender Health (WPATH)

Treatment Goals

Improve *quality of life* by

- Facilitating transition to physical state that more closely represents the individual’s sense of themselves
- Experience puberty congruent with gender
- Prevent unwanted secondary sex characteristics reducing the need for future medical interventions
- Avoid depression, risk taking
- Establish early, strong social support
Phases of Transitioning

- **Reversible**
  - clothes, hair, shoes, toys, GnRH analogues

- **Partially reversible**
  - masculinizing and feminizing hormone therapy

- **Irreversible**
  - gender reassignment surgery (GRS)

Beginning Treatment

- Assess readiness for transition
  - Physical (Tanner stage)
  - Psychological
  - Social
- Review risks and benefits of pubertal suppression and hormone therapy
  - Irreversible physical changes
  - Fertility
  - Metabolic changes

Beginning Treatment

- Obtain informed consent
- Establish reasonable expectations
- Order screening labs
- Provide referrals
- Establish follow up

Ensuring Safety

- Disclosure when patient ready
- Assess social supports
- Explore impact on school or work
- Review sexual behaviors and safer sex practices
- Referrals and resources

Case 2 Brenda

- B is a 16 year-old MTF who was kicked out by mother’s boyfriend for being “gay”
- B presents as female
- B’s chief complaint is a genital rash
- What barriers might she encounter when seeking care?

Barriers to Care

- Loss of parental and family support
- Lack of insurance/ability to pay
- Social stigma
- Hostile or violent social environments
- Lack of providers with adequate knowledge
- Insurance coverage of medications
- Consent and confidentiality issues – state by state
Create a Trans-Friendly Environment

- Staff training
- Use of preferred pronoun and name
- Visible non-discrimination policy
- Transgender inclusive health literature
- Unisex/individual bathrooms
- Respect confidentiality, don’t ‘out’

Case 2 Continued

- What to do next
  - Vocalize that this is a safe space
  - Discuss history of present illness
  - Conduct HEEADDSSS assessment

Sexual Health Screen

- What are the gender(s) of your partner(s)?
- Have you ever had anal, genital, or oral sex?
  - Do you give, receive, or both?
  - How many partners have you had in the past 6 months?
- Do you use condoms some of the time? Most of the time? All of the time?
- Any symptoms of STIs….

Case 2 Continued

- HEADDSSS screen reveals:
  - History of home and school victimization
  - Sex work
  - Consistent unprotected anal (receptive) and oral sex
  - Depression
  - Substance use including meth and alcohol
  - Street hormone and silicone injection
  - Last HIV test 1 year ago

Risk Behaviors: MTF Youth

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anal sex (no condom)</td>
<td>59%</td>
</tr>
<tr>
<td>UAI (receptive)</td>
<td>49%</td>
</tr>
<tr>
<td>Sex for money/shelter</td>
<td>59%</td>
</tr>
<tr>
<td>Sex &amp; drugs</td>
<td>53%</td>
</tr>
<tr>
<td>Coerced sex</td>
<td>52%</td>
</tr>
<tr>
<td>HIV</td>
<td>22%</td>
</tr>
<tr>
<td>AA youth</td>
<td>RR ↑ 8x</td>
</tr>
<tr>
<td>Homeless</td>
<td>18%</td>
</tr>
<tr>
<td>Incarceration history</td>
<td>37%</td>
</tr>
</tbody>
</table>

Trans Youth HIV Risk

151 MTF youth LA & Chicago

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever sex work</td>
<td>70%</td>
</tr>
<tr>
<td>Ever HIV tested</td>
<td>85%</td>
</tr>
<tr>
<td>of 19% (24) HIV+ few in care</td>
<td></td>
</tr>
<tr>
<td>Ever homeless</td>
<td>43%</td>
</tr>
<tr>
<td>Ever incarcerated</td>
<td>52%</td>
</tr>
<tr>
<td>Street Drugs</td>
<td>52%</td>
</tr>
<tr>
<td>Poverty (&lt;$1000/month)</td>
<td>70%</td>
</tr>
</tbody>
</table>

Case 2 STI Tests

- Given B’s sexual and injection drug history:
  - HIV serology
  - Syphilis serology
  - NAAT urine GC and CT
  - Rectal GC and CT
  - Pharyngeal GC
  - Hepatitis C
- What immunizations?
  - Hepatitis A and B
  - HPV

Follow Up: Harm Reduction Counseling

- Housing/shelter/food referral
- Vocational assistance
- Substance abuse screen/counseling
- Mental health screen/counseling
- Plan for STI testing
- Facilitate increased condom use
- Schedule follow-up

Thanks!!

www.transyouthla.com
Sexual Orientation is who you are sexually attracted to.

Biological Sex refers to the objectively measurable organs, hormones, and chromosomes.

Gender Identity is how you think about yourself. It is the chemistry that comprises you (e.g., hormonal levels) and how you interpret what that means.

Gender Expression is how you demonstrate your gender (based on traditional masculine, feminine, androgynous).
SUGGESTED READINGS


SUGGESTED WEBSITES

- Gender Identity Resource and Education Society of UK (GIRES): http://www.gires.org.uk

- Gender Spectrum Education and Training: http://www.genderspectrum.org

- International Foundation for Gender Education: www.ifge.org

- Parents, Families, and Friends of Lesbians and Gays (PFLAG): http://community.pflag.org

- Trans Youth Family Allies (TYFA): http://imatyfa.org

- World Professional Association for Transgender Health (WPATH): http://www.wpath.org

Provider Resources:

Transgender Health

- Lambert House: www.lamberthouse.org/

- www.ingersollcenter.org/

- Center of Excellence for Transgender Health: http://transhealth.ucsf.edu/

- Gay and Lesbian Medical Association: www.glma.org

- National Center for Transgender Equality: www.nctequality.org

- Transgender Law Center: www.transgenderlawcenter.org
Additional Provider Resources

- [www.prch.org - Physicians for Reproductive Choice and Health](http://www.prch.org)
- [www.aap.org - The American Academy of Pediatrics](http://www.aap.org)
- [www.acog.org - The American College of Obstetricians and Gynecologists](http://www.acog.org)
- [www.adolescenthealth.org - The Society for Adolescent Health and Medicine](http://www.adolescenthealth.org)
- [http://www.aclu.org/reproductiverights/ - The Reproductive Freedom Project of the American Civil Liberties Union](http://www.aclu.org/reproductiverights/)
- [www.advocatesforyouth.org – Advocates for Youth](http://www.advocatesforyouth.org)
- [www.guttmacher.org – Guttmacher Institute](http://www.guttmacher.org)
- [www.cahl.org/ - Center for Adolescent Health and the Law](http://www.cahl.org/)
- [www.gynob.emory.edu - The Jane Fonda Center of Emory University](http://www.gynob.emory.edu)
- [www.siecus.org - The Sexuality Information and Education Council of the United States](http://www.siecus.org)
- [www.arhp.org - The Association of Reproductive Health Professionals](http://www.arhp.org)
- [www.rhtp.org – Reproductive Health Technologies Project](http://www.rhtp.org)