Gender Dysphoria Beyond the Televised Case Studies

Brittney M. Dudley, MD
Aerospace Medicine, Pease ANGB
Portsmouth, NH

ABSTRACT

The aim of this paper is to provide a review of gender dysphoria and current treatment modalities followed by a discussion of ethical concerns for the Catholic physician. Gender dysphoria is an incongruence between experienced and assigned gender. It is classified as a psychiatric illness with biological etiology likely stemming from in utero hormones and genetics. Gender dysphoria in children almost always resolves by puberty. Past puberty, the disease tends to persist and can be treated with psychotherapy with or without GnRH agonists. Side effects of GnRH agonists include bone mineral density loss and stunted growth. If the patient is eligible and ready, cross-sex hormones are typically started after age 16. Short term side effects of cross-sex hormones include 20x increase in blood clots for male-to-females and liver dysfunction in female-to-males. Long term effects, including risk of coronary artery disease and cancer are unknown. In adulthood, surgical sexual reassignment can be pursued. Surgical risks include three times increased risk of all cause mortality at 10 years when matched to non gender dysphoric controls. Due to its natural history of in utero hormone and genetic abnormalities, gender dysphoria may be a CNS variant of intersex which limits traditional ethical concerns. However, due to the lack of an evidence base, gender reassignment should be considered experimental and if possible, patients should be treated in a clinical trial. It is reasonable for Catholic physicians to utilize hormonal and surgical treatments for gender dysphoria if the benefits outweigh the risks. Further, if possible, patients should be placed in a clinical trial in order to better define the risk/benefit ratio for future patients.

Medical Data

Study	Description	Type
Bailey, 2000	25,000 adult twin pairs: similarity of gender identity- .32 MZ male, .12 DZ male, .32 MZ female, .21 DZ female	Cross-sectional
Gartler 1962	XX, XY generalized tissue mosaic, female internal/ external genitalia	Case study
Phillips 1887	4 female pseudohermaphrodite siblings with mortality in first few weeks of life (CAH)	Case series

Study	Description	Type
Dittman 1991	34 CAH adults, all lived as females, 20% wished for homosexual relationship compared with 0% cohorted sisters	Cohort
Wisniewshi 2000	14 females with complete androgen insensitivity were satisfied living as females in adulthood	Case series
Imperato-McGinley 1979	18 5-alpha reductase deficient males with female external genitalia raised as females- 17 took on male identity when underwent male puberty, 1 kept female role	Case series
Hahn 2014	Brain connectivity ratios of subcortical/limbic areas is decreased in transgender pts before HT vs. healthy controls	Cross-section

Study	Description	Type
Steensma 2011	GD resolves by puberty in 85% of children	Lit review
Wallien 2008	Of 25 desisting children, 56% became homosexual	Cohort
Wallien 2007	In 120 GD children: 31% also had anxiety disorder, 23% has a disruptive disorder, and 6% had a mood disorder. These rates are similar to those seen in ADHD patients.	Cross-section

Study	Description	Type
Boot 1997	40 children with precocious puberty took GH treatment for 2 years, BMD first decreased, then began to normalize at 1 year.	Cohort
Cassio 1999	46 girls with precocious puberty randomized to GnRH or no treatment had no intergroup difference in height at 2-3 years post-treatment	RCT
De vries 2011	70 gender dysphoric adolescents had decreased depression but no change in gender dysphoria or body satisfaction from time of start of GnRH to time of start of cross sex hormones	Cohort

Study	Description	Type
Gooren 2013	In 2,307 MtF and 795 FtM on hormones for 20+ years, breast cancer rates were 4.1 and 5.9 per 100,000 (170 in women, 1.2 in men)	Cross-section
Van Kesteren 1997	816 MTF: suicide rate of 1.6% (9.29x general population); DVT/PE in 5.5% (20x general population), 293 FTM 1 DVT,	Case series
Heylens 2013	57 pts with GD, 10.5% noted important change during diagnostic period, 31% noted biggest change after surgery, and 57.9 noticed the biggest improvement in distress after starting hormones	Case series

Study	Description	Type
Hahn 2014	Brain connectivity ratios of subcortical/limbic areas is decreased in transgender pts before HT vs. healthy controls	Cross-section
De Vries 2014	22MTF and 33 FTM; 70% decrease in GD	Case series
Johansson 2010	At 5 years, 95% of 42 pts noted that they were satisfied with their sex reassignment surgery, but only 62% of physicians through their patients were improved	Case series
Neto 2012	In 332 MTF patients, 40% had obstructed voiding nessicitating a re-operation; 3% had rectal injuries, 33% had minor wound healing disorders	Case series

Study	Description	Type
Blosnich 2013	Transgender veterans at VA have 20x increased risk of suicide-related events compared to non-transgender VA patients	ohort
Dhejne 2011	At 10 years post-SRS transgender patients have 3x increased mortality when compared to their non transgender	ohort

Natural History/ Treatment

Genetics

In Utero

Diagnosis in Child

Typical therapy: Pt remains natal gender, counsel parents to compromise and support, encourage parents to spend more time with child
Decision point: tanner stage 2

Adolescence

Transgender treatment paid for by:
VA
Medicare
Some Medicaid
Aetna
Blue Shield of California

Fully Reversible Intervention

Typical therapy: leuprolide SQ 50 mcg/kg/day or Lupron depot IM 15 mg Q4weeks or 22.5 mg Q3months or histrelin implant annually, continue family/individual psychotherapy to find ways to alleviate GD, “real life experience”
Contraindications: anaphylaxis to GnRH agonists

Partially Reversible Intervention

Minimum of 16 years of age + eligible and ready

MTF	FTM
Stop Gnrh agonist. Begin 100 mg testosterone-ester IM Q2weeks for 6 months then dose increased to 250 mg Contraindications: pregnancy, unstable CAD, untreated polycythemia	Stop GnRH agonist. Begin oral 17Beta estradiol 5 micrograms/kg/day, increasing by 5 micrograms/kg/day every 6 months. Contraindications: DVT, PE, ESLD, estrogen sensitive neoplasm, smoking

Non-reversible Intervention

Minimum of 16 years of age + 2 psych LOR

MTF	FTM
Penile inversion vaginoplasty, breast augmentation	Mastectomy, metoidoplasty (from clitoris), phalloplasty (free flap), vaginectomy

Lifelong Maintenance

Decrease hormones to maintenance dose. Monitor for side effects and change.

Ethical Issues

1. Natural law says that gender is binary.

2. Some SRS require sterilization.

3. There is a lack of clinical evidence for treatment.

Discussion

Because there is a reasonable medical possibility that the patient is indeed the stated gender, the ethical concern of natural law is resolved. Because sterilization is an incidental event rather than a goal, that ethical concern is resolved.

However, there have been no randomized controlled trials on any therapy, drug, or surgery for gender dysphoria. This poses an ethical issue for a health care provider as it is impossible to offer informed consent to the patient or to ensure that no harm is being done to them. This concern is resolved if patients are referred to providers actively researching these treatment.

References

For a complete list of references please see the presenter

Bailey, J. Michael, Michael P. Dunne, and Nicholas G. Martin. "Genetic and Environmental Influences on Sexual Orientation and Its Correlates in an Australian Twin Sample." *Journal of Personality and Social Psychology* 78.3 (2000): 524-36.

Blosnich, John R., George R. Brown, Phd Jillian C. Shipherd, Michael Kauth, Rebecca I. Piegari, and Robert M. Bossarte. "Prevalence of Gender Identity Disorder and Suicide Risk Among Transgender Veterans Utilizing Veterans Health Administration Care." *Am J Public Health American Journal of Public Health* 103.10 (2013)

Dhejne, Cecilia, Paul Lichtenstein, Marcus Boman, Anna L. V. Johansson, Niklas Långström, and Mikael Landén. "Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden." *PLoS ONE* 6.2 (2011):

Johansson, Annika, Elisabet Sundbom, Torvald Höjerback, and Owe Bodlund. "A Five-Year Follow-Up Study of Swedish Adults with Gender Identity Disorder." *Arch Sex Behav Archives of Sexual Behavior* 39.6 (2009): 1429-437.

Rossi, Neto R., F. Hintz, S. Krege, H. Rübben, Dorp F. Vom, and J. Hess. "559 Gender Reassignment Surgery – a 13 Year Review of Surgical Outcomes." *European Urology Supplements* 12.1 (2013)

Smith, Yolanda L. S., Stephanie H. M. Van Goozen, Abraham J. Kuiper, and Peggy T. Cohen-Kettenis. "Sex Reassignment: Outcomes and Predictors of Treatment for Adolescent and Adult Transsexuals." *Psychological Medicine Psychol. Med.* 35.1 (1999): 89-99.

"Young Adult Psychological Outcome After Puberty Suppression and Gender Reassignment." *Pediatrics* 134.4 (2014)

Poster produced by Faculty & Curriculum Support (FACS), Georgetown University School of Medicine