

Intersex conditions – why they are different to transsexuality

Introduction

The Christian Institute has from the start objected to the Gender Recognition Bill in principle. Our particular concern has been how the legislation will affect religious bodies.

The Church of England Report *Some Issues in Human Sexuality* correctly points out that the problem Christians have with transsexualism is that the body can never be seen as separate from the soul.¹ This leads to a form of Gnostic dualism. Gnosticism was rejected by the Early Christian church.²

Biblical Christians therefore believe that you cannot change your sex. Theologically and ethically this is quite a different matter from an intersex or other similar physical conditions. This briefing explains why.

There are very rare cases of babies whose sex at birth is ambiguous. Intersex conditions, or similar physical illnesses, do not present the same ethical concerns to Christians as ‘gender dysphoria’ (an alternative name for transsexualism). In intersex conditions the body is still at one with the soul. Someone is not seeking to have another body, just a cure for their physical illness.

Intersex conditions are rare

The incidence of all intersex conditions is rare. In fact they involve approximately fewer than 2 out of every 10,000 births (0.02%).³ True hermaphrodites are extraordinarily rare: one review found fewer than 5 cases per year worldwide.⁴ Even conditions where the non sex chromosomes are abnormal are rare. For example campomelic dysplasia (see below), which is due to abnormalities of chromosome 17, occurs in 1 in 200,000 births.⁵ Very few doctors will encounter such conditions in their professional career.

¹ *Some Issues in Human Sexuality – A Guide to the Debate*, discussion document from the House of Bishops’ Group on Issues in Human Sexuality, Church House Publishing, 2003, page 249

² For more information on the link between gnosticism and transsexualism see *Transsexualism Briefing – Commons Stage*, The Christian Institute, March 2004, page 3

³ Sax L, ‘How Common is Intersex? A Response to Anne Fausto-Sterling’, *Journal of Sex Research*, 2002, 39(3), page 177

⁴ van Niekirk, W A, ‘True Hermaphroditism’, *American Journal of Obstetrics and Gynecology*, 126(7), 1976, pages 890-907

⁵ Campomelic Dysplasia, *The GAPS Index*, see <http://www.icomm.ca/geneinfo/camptdys.htm> as at 4 March 2004

Many assert that the true rate of intersex conditions is 2 per 100 live births.⁶ However this value is incorrect because it includes conditions such as Klinefelter's and Turner's syndromes, which are not intersex conditions.⁷

The Gender Recognition Bill

Nevertheless the fact that intersex conditions and similar physical illnesses are rare does not mean they are an unimportant issue. Those who suffer from them deserve the highest degree of Christian care and love. But concern for such people in no way relates to the Gender Recognition Bill. The Bill does not cover intersex conditions. This is because doctors are already free to act in such cases. Legislation is unnecessary.

The Gender Recognition Bill is concerned with gender dysphoria. The Bill is very clear that to obtain a gender recognition certificate a person must be diagnosed as having "the disorder variously referred to as gender dysphoria, gender identity disorder and transsexualism" (clause 2 and clause 25 in the Bill at First Reading in the House of Commons).

A transsexual has a healthy body. No-one denies that a man diagnosed with 'gender dysphoria' will be physically normal, e.g. he will have XY chromosomes like other men. Intersex conditions and similar physical illnesses are of a completely different character. They do not present the ethical difficulties of transsexualism. All are outside the ambit of the Bill.

Intersex conditions and similar physical illnesses

There exists a range of intersex conditions and similar physical illnesses. Some of these are outlined in detail below.

Genetic abnormalities involving the sex chromosomes

a. Turner's syndrome (not an intersex condition)

Turner's syndrome, where women have only 1 X chromosome, only occurs in females⁸. Someone with Turner's syndrome will have a feminine appearance but because she may not have ovaries, breast development and menstruation do not occur spontaneously at puberty.⁹

b. 45XO/46XY mosaicism (sometimes an intersex condition)

There is a **separate** condition called 45XO/46XY mosaicism. Individuals with this mosaicism may have male (>90%)^{10, 11}, female (5%)¹² or ambiguous

⁶ Blackless M, Charuvastra A, Derryck A, Fausto-Sterling A, et al, 'How Sexually Dimorphic Are We?, Review and Synthesis', *American Journal of Human Biology*, 2000, 12(2), pages 151-166

⁷ Sax L, *Op cit*, page 175; Creighton, S and Minto, C, 'Managing Intersex', *BMJ*, 2001, 323, page 1265

⁸ Postellon D, 'Turner Syndrome', *emedicine*, see <http://www.emedicine.com/ped/topic2330.htm> as at 2 March 2004

⁹ Migeon C J, Wisniewski A B, Gearhart J P, 'Syndromes of Abnormal Sex Differentiation', *The Johns Hopkins Children's Centre*, page 24

¹⁰ Telvi L, Lebbar A, Del Pino O, et al, '45,X/46,XY Mosaicism: Report of 27 cases', *Pediatrics*, 1999, 104(2), page 304

¹¹ 'About XY/XO mosaics' taken from xyTurners – Genetic Mosaics Support Group website see <http://www.xyxo.org> as at 2 March 2004

¹² *Loc cit*

genitalia (5%)¹³ at birth. Those with male genitalia undergo normal male sexual development, whilst those with female genitalia are identical to women with Turner's syndrome (see above). In this category those individuals with ambiguous genitalia have an intersex condition. They are similar to a hermaphrodite in that they have partly developed male and female sexual organs.¹⁴

c. Klinefelter's syndrome (not an intersex condition)

Klinefelter's syndrome is only seen in males.¹⁵ Most males born with this condition go through life without being diagnosed.¹⁶ At puberty Klinefelter men undergo normal male sexual development although some may be infertile with small external genitalia.¹⁷

Other chromosomal abnormalities

It is true that genes on chromosomes other than the X and Y chromosomes may also determine a person's genitalia. Unfortunately the resultant effect may be such that these individuals do not carry on a completely normal life. For example, alteration of a particular gene on chromosome 17 may cause the disease campomelic dysplasia. This produces dwarfism and so-called 'sex reversal' whereby XY males have female external genitalia, uterus, vagina and fallopian tubes.¹⁸ Death usually occurs in the neonatal period, i.e. within the first month of life, due to respiratory problems.¹⁹ Similarly altered genes on chromosome 6 may cause the intersex condition known as female pseudohermaphroditism.²⁰

Feminine brain?

During the debates on the Gender Recognition Bill it was claimed: "Serious medical evidence exists that some people who become transsexuals in later life have been exposed to an abnormal surge of either male or female hormones during pregnancy, which has caused them to have a psychological sex that is different from their genital sex."²¹

However, there is reason to question this. As Lord Chan, a professor of medicine, explained to the House of Lords, "It is difficult to determine whether brain structure influences their behaviour, or whether brain changes have come about through long-continued behaviour. An example is that of an unusual study on London taxi drivers, who have enlargement of the part of the brain associated with navigation..."²². Another

¹³ *Loc cit*

¹⁴ Migeon C J, Wisniewski A B, Gearhart J P, *Op cit*, page 25

¹⁵ Chen H, 'Klinefelter syndrome', *emedicine*, see <http://www.emedicine.com/PED/topic1252.htm> as at 2 March 2004

¹⁶ *Loc cit*

¹⁷ *Loc cit*

¹⁸ Hall B D, Spranger J W, 'Campomelic Dysplasia. Further Elucidation of a Distinct Entity', *American Journal of Diseases of Children*, 1980, 134(3), pages 285-289

¹⁹ Campomelic Dysplasia, *The GAPS Index*, *Op cit*

²⁰ Chromosome browser, *The Wellcome Trust*, see

http://www.wellcome.ac.uk/en/genome/interactive/gene_index_6.html#browser as at 11 March 2004

²¹ Robert Key MP, House of Commons, Hansard, 23 February 2004, col. 84

²² House of Lords, Hansard, 18 December 2003, col. 1307

example of how training can alter brain structure involves a study that taught people to juggle. As a result of their new skill, two areas of the brain in the juggling students increased in size. This increase disappeared after the people stopped juggling.²³

Bearing in mind the claim that transsexualism is the result of an abnormal surge of either male or female hormones during pregnancy, why does this abnormal surge only affect the brain and not other organs such as the testes and ovaries that are also particularly sensitive to sex hormones? In intersex conditions where there is an abnormal surge of male hormones, females develop genitalia that looks masculine.

Conversely, why does the abnormal amount of sex hormones in pregnancy in intersex conditions affect other organs and not the brain? It has been noted, “in the majority of cases [where there is abnormal hormone levels in pregnancy], these subjects do not develop towards transsexualism”.²⁴

The medical evidence that claims to show a feminine brain structure in male-to-female transsexuals was based on two medical papers that were published in 1995 and 2000.²⁵ The authors of these papers deduce that because the transsexuals were not on hormone therapy immediately prior to their tests, the brain structure appearance was not due to any hormone therapy. However these transsexuals had taken female hormones for many years (from 5+ up to 13 years) before they stopped and this must have had an effect on their brain structure as it had had on the rest of their body, especially as the transsexuals had never taken any therapy to reverse the effect of the female hormones.

Summary

- Transsexualism is different from the physically-altering intersex conditions such as 46XX males or 46XY females and other chromosomal abnormalities that affect a person’s sexual organs such as campomelic dysplasia or Turner’s syndrome.
- Unlike intersex and similar conditions, transsexualism does not cause an overtly physical disorder.
- Unlike intersex and similar conditions, transsexualism is not caused by a chromosomal, hormonal, or genetic abnormality.
- Transsexualism is a psychological and not a physical condition. The prominent American psychiatrist Robert Spitzer has long been at the forefront of arguing for gay rights. But Spitzer has said that transsexualism is a mental illness because in every culture as children mature they are always expected to fulfil gender-based roles and engage in gender-congruent behaviours. If a person of one gender rejects these roles and behaviours and assumes those of the opposite sex this is a

²³ ‘Juggling Can Boost Brain Power’, 22 January 2004, BBC Online see <http://news.bbc.co.uk/1/hi/health/3417045.stm> as at 17 February 2004

²⁴ Michel A, Mormont C, Legros J J, ‘A Psycho-Endocrinological Review of Transsexualism’, *European Journal of Endocrinology*, 2001, 145, page 366

²⁵ Kruijver F P M, Zhou J-N, Pool C W et al, ‘Male-to-Female Transsexuals have Female Neuron Numbers in a Limbic Nucleus’, *Journal of Clinical Endocrinology & Metabolism*, 2000, 85(5), pages 2034-2041;

Zhou J-N, Hofman M A, Gooren L J G et al, ‘A Sex Difference in the Human Brain and its Relation to Transsexuality’, *Nature*, 1995, 378(6552), pages 68 -70

disorder. Spitzer has rejected the idea that, “everything is socially determined” and that “gender is not dichotomous” with everyone somewhere between the 2 poles. Instead a human being is “biologically one or the other” sex and failing to identify with the gender with which one was born “is a dysfunction”.²⁶

Conclusion

Christians should help and care for sufferers of intersex conditions and those who suffer from other chromosomal abnormalities. As a matter of fact their plight is in no way connected to the Gender Recognition Bill.

There are these important distinctions and yet the Bill still presents great difficulties for churches. Individual Christians and those of other faiths will, in certain circumstances, be required by the Bill to act against their conscience. They believe that a person is a body-mind unity. They believe it is immoral to deform and damage a healthy body in the interests of a disordered and unhealthy mind. They are also concerned at the lack of satisfactory evidence regarding the long-term consequences of such procedures.

²⁶ *Psychiatric News*, 38(14), 18 July 2003, page 25