Conjectures Concerning Cross-Sex Hormone Treatment of Aging Transsexual Persons

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ABSTRACT

Introduction. Guidelines for cross-sex hormone treatment of transsexual people are now in place. However, little attention has been paid to the issue of treatment suitability for older people. Does existing treatment need to be adapted as subjects age, and does it make a difference if treatment is only started when the subject is already older?
Aim. To assess the necessity of adapting cross-sex hormone administration for elderly transsexual people.
Main Outcome Measures. Risks/benefits of continued use of cross-sex hormones with regard to bone health, cardiovascular risks, and malignancies.
Methods. Due to lack of data on the subject population, sex hormone treatment of other conditions in older non-transsexual people has been taken as the best available analogy to determine the extent to which these might be applicable to comparable transsexual persons. Findings in transsexual people receiving cross-sex hormone treatment sometimes modified the above approach of applying guidelines for the elderly to the aging transsexual population.
Results. Testosterone administration to female-to-male transsexual persons (FtoM) carries little risk with regard to cardiovascular disease and cancer. For those with high hematocrit or cardiac insufficiency the dose can be reduced. Administration of estrogens to male-to-female transsexual persons (MtoF), particularly when combined with progestins, does significantly increase the risk of developing cardiovascular disease (almost a twofold incidence compared with the general population). This may require dose adjustment or changing from oral to safer transdermal estrogens. Tumors of the breasts, prostate and pituitary may occur. In FtoM, breast cancer can occur even after breast ablation. Older subjects can commence cross-sex hormone treatment without disproportionate risks.
Conclusion. Cross-sex hormones may be continued into old age but monitoring for cardiovascular disease and malignancies, both of the old and new sex, is recommended. MtoF will have more health complications in old age than FtoM requiring adaptations of treatment. **Gooren L and Lips P. Conjectures concerning cross-sex hormone treatment of aging transsexual persons. J Sex Med 2014;11:2012–2019.**

Key Words. Transsexual; Aging; Cross-Sex Hormones; Cardiovascular Disease; Cancer

Introduction

The administration of cross-sex hormones to transsexual persons has become accepted medical practice. However, a question mark hovers over the continuation of such treatment beyond the age of 60 years. Should the dosage level remain the same as the subject ages? Should it be adjusted? Can hormone treatment be stopped altogether? This article addresses these questions. It also examines the feasibility of initiating cross-sex hormone treatment in transsexual people aged between 60 and 70 years.

Due to limited endocrine data on older transsexual subjects, any recommendations must necessarily be largely speculative, but they do reflect parallel experience with treatment approaches in other aging people receiving sex steroid replace-

ment therapy, while also taking account of knowledge gained from the treatment of transsexual people.

Endocrine Treatment Recommendations for Transsexual People

The first reports detailing cross-sex hormone treatment of transsexual people began appearing nearly a half-century ago [1–3]. In 1981 Walter Meyer published a survey of such treatment in 20 gender clinics [4]. In 2009 a major step forward was taken when a task force of The Endocrine Society formulated guidelines for the endocrine treatment of transsexual people [5]. Another paper provided recommendations for treatment and its potential complications [6].

The guidelines specified dosage schemes of hormones, contraindications, recommendations for clinical follow-up and warnings concerning short- and long-term side effects. These were necessarily based on clinical experience and general expertise in the area of sex hormone treatment as available knowledge about cross-sex hormone treatment did not allow for evidence-based recommendations [7].

Since that time several papers on the hormonal treatment of transsexual people have appeared, but none has specifically addressed the needs of an aging population and the potential pitfalls that might be encountered when providing cross-sex hormone treatment to it. In this article, the literature on hormone treatment of transsexual people is reviewed in the light of its relevance to that aging population. This information is set against the general principles of providing sex hormone treatment to elderly (non-transsexual) people. The question of whether and to what extent sex hormone treatment of elderly men and women can be applied to transsexual subjects is also scrutinized, as well as points where differences emerge.

Older women are compared with transsexual women who were born male but have undergone sex-change treatment (referred to in this article as MtoF). Older men are compared with transsexual men who were born female (FtoM). The recommendations made are not evidence-based, but represent clinical expertise and could serve to guide future research into cross-sex hormone treatment specifically aimed at older transsexual subjects.

The Aging of the Transsexual Population

Little is known about the age distribution of transsexual people throughout the world, though the matter has recently been reviewed [8]. Data from the gender clinic of the VU University medical center in Amsterdam, the Netherlands, which started in 1975, might provide some guidance. This is the only gender clinic in the Netherlands, a country of 16 million people. The health insurance system of the Netherlands provides generous access to medical care, including all aspects of sex reassignment treatment. Since 1975 there has been a steady growth of those seeking sex reassignment and in the 30 years until 2005, applications for treatment consisting of cross-sex hormone administration and surgery including gonadectomy were received by 2,307 MtoF (approximately 70 per year) and 795 FtoM (about 27 per year). This is a sex ratio of roughly 3:1.

Most MtoF were between 25 and 40 years old when applying for sex reassignment treatment. FtoM were younger on average (20 to 35 years). But occasionally people over 50 or even 60 years of age sought help. Postsurgery cross-sex hormone treatment has to be continued to guarantee well-being in the sex experienced as one's own and to prevent the sequelae of sex steroid deficiency such as osteoporosis. Of the above population approximately 700 of the 2,307 MtoF and 225 of the 795 FtoM have now reached the age of 50 years.

Pertinent Questions

Two questions immediately arise: The first is whether cross-sex hormone treatment needs to be adjusted with age, analogous to sex steroid replacement therapy in older non-transsexual people, such as postmenopausal women. The second is whether transsexual persons above the age of 50–60 years should be accepted for cross-sex hormone treatment, and what possible precautions should pertain. There are no easy answers to these questions. A fundamental issue with regard to the first one is whether MtoF who have undergone decades of estrogen treatment (often with antiandrogens) have acquired a biological–endocrinological status identical to natal women, and whether FtoM can be similarly compared with natal men. Obviously, the answer should come from controlled studies but these are unlikely to be feasible. Arguing against biological feminization of MtoF is a study reporting that breast cancer in MtoF displays more similarities with breast cancer in men than in women [9]. Furthermore, androgen-deprived MtoF treated with estrogens may still develop a prostate carcinoma [10]. There are clear differences in the white adipose tissue of males and females at many levels,