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Sexual dimorphism and transgender medicine: appealing to a viewer's sense of beauty

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Abstract

Sexual dimorphism — the phenotypic structural differences between male and female faces — has been shown to be an important universal component of beauty. This concept plays a key role in facial feminization surgery (FFS), which consists of contouring and reshaping features of the skull itself to alter the foundation of the face. FFS has been shown to improve quality of life among transgender women and therefore an understanding of the procedure and the concept of sexual dimorphism is key for plastic surgeons, dermatologists, and other healthcare providers.

Keywords: sexual dimorphism, facial feminization surgery, quality of life

Introduction

Human appreciation of beauty has been shown to be a cross-cultural and innate phenomenon. Infants as young as three months of age have the ability to discriminate attractiveness. International studies have shown that despite ethnic and cultural variation, certain facial features are considered beautiful across cultures. Specifically, facial averageness, youthfulness, skin homogeneity, symmetry, and sexual dimorphism are known to be important universal components in facial beauty [1].

Discussion

Sexual dimorphism refers to phenotypic differences in body and facial structure that are driven by

gonadal hormones during puberty. With regard to facial structure, in men, testosterone influence leads to increased relative lower face size, broader and longer chins, and prominent cheekbones and brow ridges [1]. For females, estrogen inhibits the development of these masculine features and instead leads to traditionally feminine traits including a smaller lower to upper face ratio, a smaller chin, fuller lips, and higher eyebrows [1]. Elevated levels of these hormones may also lead to more strongly dimorphic features. Given the influence of sex hormones on these dimorphic features, the extent to which a face is more typically masculine or typically feminine may signal increased genetic fitness and reproductive ability [1]. Therefore, one would expect both sexes to display preferences for partners with sex-typical characteristics. Although the preference for masculinity in male faces varies across studies, feminized female faces are consistently found to be more attractive than masculinized female faces [1].

Understanding this concept of sexual dimorphism is important to transgender healthcare. For some transgender individuals, passing or blending (one's ability to be perceived as cisgender) is an important component of not only identity but also personal safety [2]. Despite clothing, body language, or other treatments such as hormone replacement therapy, the subtle differences in facial structure described above are often the first to be noticed by others and may lead individuals to opt for facial surgery [3].

Facial feminization surgery (FFS) refers to a surgical procedure which is used to reconstruct the faces of

male-to-female transgender women to have more typically feminine features. Originally developed by Dr. Douglas Ousterhout in the 1980s, FFS may include forehead and orbital recontouring, rhinoplasty, cheek enhancement, lip augmentation, and chin contouring, among other procedures. Ousterhout initially consulted physical anthropology resources and also examined skulls to determine the differences in morphological characteristics between male and female faces [4]. He found that throughout the 19th century, the feminine look was centered around beauty, child-like features, and desirability — German doctor and anthropologist Johann Alexander Ecker described the profile of the female skull as an “intermediary between children and males.” Overall, the recognition of a female face was based on its ability to appeal to the viewer’s sense of beauty [4]. Ousterhout pioneered FFS by working on the bone itself, altering the foundation of facial features. He went on to perform over 1400 such surgeries and publish extensively in the literature regarding his techniques [4].

FFS represents a growing field of facial plastic surgery. It is estimated that there are nearly one million transgender adults living in the United States,

and this population is increasing yearly [5]. Though the data on surgeries itself is limited, one in four respondents in the 2015 National Transgender Survey reported having had at least one form of transition-related surgery. Forty three percent of transgender women responded that they would be interested in undergoing FFS in the future [6].

FFS has been associated with lower rates of depression and anxiety and improved quality of life among transgender women — the impact of being recognized as a woman is a major component of their transition and can contribute to better overall health status [7]. As more transwomen opt for FFS, it is vital for plastic surgeons, dermatologists, and other healthcare professionals to be aware of the underlying structural differences between male and female faces. An understanding of these dimorphic features, combined with an approach tailored to the specifications and goals of the patient, will yield better surgical results and improved quality of life.

Potential conflicts of interest

The authors declare no conflicts of interests.

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