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Sex Reassignment Surgery : Experience at King Chulalongkorn Memorial Hospital

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Abstract **Transsexualism usually generates major suffering and may be responsible for many consequences such as suicide, self-mutilations, affective disorders and social disabilities.**

The treatment of transsexualism is conventional psychiatric therapy. For those who fail to adjust to their biological sex by the conventional ways, the disharmony of their body and mind causes unhappiness and disturbs their normal daily life. Sex reassignment surgery will be the only way to transform their biological sex to the image in their mind.

Between 1993-1999, fifty two patients underwent sex reassignment surgery at King Chulalongkorn Memorial Hospital with outcome satisfactory to all patients.

Transsexualism has been defined as an extreme gender dysphoria. It refers to unhappiness with one's biological sex, the desire to have the body of the opposite sex, and to be regarded by others as a member of that other sex.

In the past, the medical community has always been questioned on medical, legal, and social or ethical aspects of transsexualism. The aetiology of the trouble is still unknown. In the absence of biological marker, the syndrome of transsexualism can be defined only with clinical criteria.

The conventional treatment of transsexualism is psychiatric therapy. For those who fail to adjust to their biological sex by the conventional ways, the disharmony of their body and mind causes unhappiness and disturbs their normal daily life. Then sex reassignment surgery will be the only way to transform their biological sex to the image in their mind.

Patients and Methods

The transsexuals patients who had sex reassignment surgery during September 1993 - July 1999 in King Chulalongkorn Memorial Hospital were retrospectively studied regarding the outcome after surgery both physically and mentally.

There were a total of 52 patients operated during the studied period. Among these, 46 cases were male-to-female transsexual in whom penile and scrotal skin inversion were used to line the neovaginal canal.[1] Another two cases of this male to female group had secondary sex reassignment surgery by using rectosigmoid colon to reconstruct the vaginal canal[2,3] after failure of vaginal cavity reconstruction elsewhere. Four cases were female-to-male transsexual (Table 1). The ages of the patients ranged from 20-46 years (means 26 years). Prior to transsexual surgery, all patients underwent psychological evaluation by the psychiatric staffs in King Chulalongkorn Memorial Hospital. The decision to undergo surgery was reviewed and approved when psychological evaluation confirmed that each patient was true transsexualism and appropriated for transsexual operation.

All male-to-female sex reassignment patients were advised to dilate the neovaginal cavity by a penile-shape mold to prevent stenosis of its cavity (Figure 1). The dilatation period was usually for 18 months after which it would be lesser risk for stenosis. Follow-up period ranged from 3 months to 4 years (mean 20 months). Some patients went abroad with their husbands and came back to visit us years after the surgery with no further problem regarding the sex reassignment surgery. However, some patients returned many years later for other aesthetic surgery such as thyroid cartilage shaving, blepharoplasty or rhinoplasty.

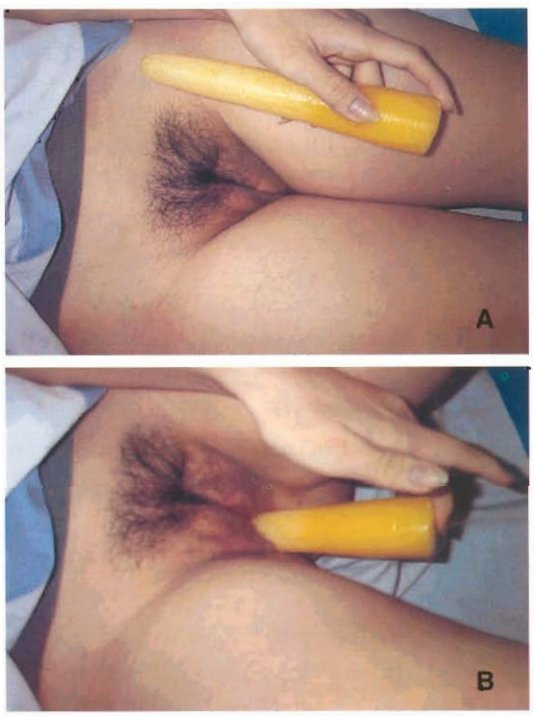

Fig. 1 Photograph showing results of male-to-female sex reassignment operation (A), and the use of penile-shape mold for manual dilatation of the neovaginal cavity (B).

Results

The outcome of the male-to-female transsexual surgery was satisfactory. All patients were satisfied with both sexual appearance and function. All of them could have satisfactory sexual activities. There were 4 minor unfavorable results such as redundancy of the labia majora that were subsequently corrected under local anesthesia when necessary. For female-to-male sex reassignment surgery, the outcome was not as satisfactory as compare to the male-to-female group because the neophallus had to be constructed in stages and all of the cases developed urethral fistula which were very difficult to overcome. In addition, the donor areas where tissues were harvested to reconstruct the phallus were unsightly (Table 1). The neophallus in all cases failed to function as a sex organ but just appeared only as a symbol organ (Figure 2). Nevertheless, none of the 4 patients regretted their decision to undergo the transsexual surgery.

Discussion

Transsexualism usually generates major suffering and may be responsible for many serious conse-

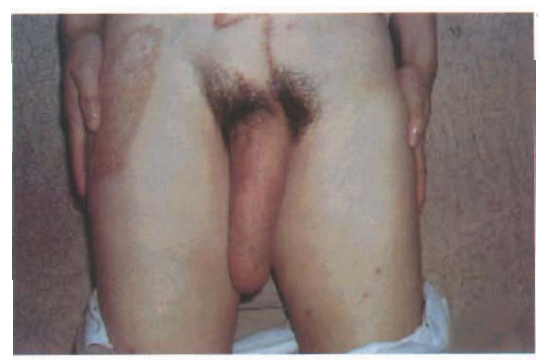

Fig. 2 Outcome of female-to-male transsexual surgery with unsightly donor scars.

Table 1 Outcome of female-to-male transsexual surgery.

No. Case	Age	Phalloplasty technics	Complication	Unsatisfactory results
3	23, 37, 35	Reverse Transverse Rectus abdominis flap (Reverse TRAM flap)	Urethral fistula	Unsightly scar of the donor site, non-functioning phallus
1	27	Radial forearm free flap	Urethral fistula	Unsightly scar of the donor site, non-functioning phallus

quences like suicide, self-mutilations, affective disorders and social disabilities. Previously, the society did not accept the role of sex reassignment surgery until recent studies[1-11] have demonstrated that transsexualism is also an organic disorder and not just only psychiatric problem. Subsequently, a large number of transsexuals have received hormonal treatment and/or sex reassignment surgery (SRS).

Currently sex reassignment surgery is available in many medical centers and hospitals. The outcome after the operation depends not only on the ability and skill of the surgeons but also on how patient evaluation and selection are made. If the patients are not true transsexual and had not been properly assessed psychologically, the surgery performed may yield tragic results. All of our 52 patients received full psychiatric evaluation and the decision for transsexual operation then reviewed and approved by the surgical team. The outcome of surgery was well accepted and satisfied in all patients although in female-to-male operation the reconstructed neophallus was complicated with urethral fistula and unable to achieve satisfactory sexual function.

We have encountered many patients, who had transsexual operation performed elsewhere, then come to us asking for penile reattachment, which is not possible. Some of them even have tried to commit suicide. In such cases, we have no information as regard to their psychiatric assessment prior to the initial sex reassignment operation. It is our opinion that, when preoperative psychiatric evaluation and assessment is properly done, the outcome of sex reassignment operation with good technical results would be well accepted. The fact that many of our patients later returned for additional aesthetic surgery to enhance their sex reassignment figure, served to confirm their full acceptance of the sex reassignment made.

Conclusion

We present the basic background concept of transsexualism and share our experiences in sex reassignment surgery at King Chulalongkorn Memorial Hospital. This is to demonstrate that the results of transsexual treatment will be satisfactory when sex reassignment surgery is performed by skillful surgeons to the appropriate patients who have been psychologically evaluated and documented of their transsexual role problems. However, the technical results of female-to-male sex reassignment surgery is still far from the ideal ones which should produce good appearance in both the size and shape of the neophallus as well as good functioning for both urination (standing to void and without fistula) and sexual activities. In addition, the operation should be a single-stage and leave least noticeable scar.

References

1. Small MP Penile and scrotal inversion vaginoplasty for male to female transsexuals. Urology 1987; 29(6): 593-7.
2. Tiewtranon P, Kittisin P. Vaginal reconstruction with the rectosigmoid colon. Paper presented at The Proceedings of the X Congress of the International Confederation for Plastic and Reconstructive Surgery, Madrid, Spain, 28 June - 3 July 1992. Plast Surg 1992; 2: 887-9.
3. Karim RB, Hage JJ, Cuesta MA. Rectosigmoid neocolpopoiesis for male-to-female transsexuals: Amsterdam experience. Ann Plastic Surg 1996; 36(4). 388-91.

4. Witelson SF. Hand and sex differences in the isthmus and genu of the human corpus callosum. A postmortem morphological study. Brain 1989; 112: 799-835.
5. Habib M, Gayraud D, Oliva A, Regis J, Salamon G, Khalil R. Effects of handedness and sex on the morphology of the corpus callosum: a study with brain magnetic resonance imaging. Brain Cogn 1991; 16(1): 41-61.
6. Allen LS, Richey MF, Chai YM, Gorski RA. Sex differences in the corpus callosum of the living human being. J Neurosci 1991;11(4): 933-42.
7. Aboitiz F, Scheibel AB, Zaidel E. Morphometry of the Sylvian fissure and the corpus callosum, with emphasis on sex differences. Brain 1992;115: 1521-41.
8. Zhou JN, Hofman MA, Gooren LJ, Swaab DF. A sex difference in the human brain and its relation to transsexuality. Intl J Transsexual 1997; 1: 1
9. Hu S, Pattatucci AM, Patterson C, Li L, Fulker DW, Cherny SS, Kruglyak L, Hamer DH. Linkage between sexual orientation and chromosome Xq28 in males but not in females. Nat Genet 1995;11(3): 248-56.
10. Turner WJ. Homosexuality, type 1: an Xq28 phenomenon. Arch Sex Behav 1995; 24(2): 109-34.
11. Rice G, Anderson C, Risch N, Ebers G. Male homosexuality: absence of linkage to microsatellite markers at Xq28. Science 1999; 284(5414): 665-7.