Case report

Vulvar condylomatosis after sex reassignment surgery in a male-to-female transsexual: Complete response to imiquimod cream

Trinidad Labanca a,*, Ivan Mañero b

a Department of Gynecology, Institute of Plastic Surgery Dr. Ivan Mañero, Barcelona, Spain
b Department of Plastic and Reconstructive Surgery, Institute of Plastic Surgery Dr. Ivan Mañero, Barcelona, Spain

1. Introduction

Human papillomavirus (HPV) is the most common sexually transmitted disease in developed countries. The majority of patients infected with HPV have a subclinical transient infection that is limited by viral type, local environmental factors, and the host immune response. However, in some cases it may result in a broad spectrum of diseases, including genital warts, dysplasia and invasive carcinoma.

The rate of genital HPV infection among biological men (XY) is similar to that in biological women (XX) (Giuliano et al., 2008). Anogenital warts, or condyloma acuminata are the most common clinical manifestation of HPV infection, and are predominantly caused by HPV 6- and 11; which are considered nononcogenic HPV subtypes. In biological men (XY), such infection, with HPV 6- and 11, are known to cause external genital lesions, such as perianal condyloma acuminata and penile intraepithelial neoplasia (Ingles et al., 2015). To date, there is a paucity of data on the prevalence and management of condyloma acuminata in transsexual individuals.

We present a case of a female transsexual who underwent male to female sex reassignment surgery (MTF-SRS) by inverted penile skin vaginoplasty who presented one year after the surgery with condyloma acuminata of the vulva.

2. Case

The patient is a 19 year-old female transsexual who had undergone MTF-SRS by inverted penile skin vaginoplasty one year prior to this presentation, and had an uneventful postoperative course. She had been under feminizing hormonal treatment (estradiol valerate 4 mg/day and cyproterone acetate 50 mg/day) for the last 3 years and had lived a completely negative review of systems. On physical examination, she had normal vital signs and otherwise unremarkable examination. On pelvic examination, the patient was noted to have multiple asymptomatic papular growths in the genital area. The patient reported no sexual partners. Her sexual orientation was heterosexual.

Prior to her surgery she was noted to have a negative blood panel for infectious diseases (HIV, hepatitis B and C). She initiated sexual intercourse after the SRS, at the age of 19. She had never had sexual intercourse as a male. Since her SRS, she had a total of two male sexual intercourse as a female. Since her SRS, she had had occasional alcohol intake and had no other relevant clinical data.

Speculum examination, the patient was noted to have multiple asymptomatic smooth, verrucous nonpigmented exophytic lesions with fingerlike projections in the labia majora, minora and clitoris. Speculum
examination did not reveal any evidence of disease elsewhere. No perianal warts were detected (Fig. 1).

Based on these findings, the patient was diagnosed with vulvar condylomatosis. Current guidelines do not recommend biopsy of warts unless the diagnosis is uncertain or dysplasia is suspected (Beutner et al., 1998). In seeking a recommendation for the patient, we searched the published literature and did not find any standard approaches for the treatment of genital warts after SRS in transsexual individuals. At that point, the patient was tested for other sexually transmitted infections, such as HIV, syphilis, hepatitis B and C, and all results were negative. The patient reported that her last sexual contact was 2 months prior to presentation.

After appropriate counseling, the patient was started on local 5% imiquimod cream three times a week until resolution of the warts. She was advised not to have sexual intercourse until the lesions were cleared. The patient returned for routine surveillance once a month until all the warts had resolved. The patient tolerated the treatment well and experienced no side effects. She was noted to have a partial response eight weeks after initiation of treatment (Fig. 2) and a total response at twelve weeks (Fig. 3). At the time of writing this manuscript, the patient had a total follow up of six months after the complete response to treatment, and the lesions had not reappeared.

3. Comments

Gender dysphoria (GD) is a condition that many transsexual patients experience throughout their lives, and it refers to the discomfort or distress that is caused by the discrepancy between their gender identity and sex assigned at birth. Sex reassignment surgery is one of the treatments options proposed for individuals seeking care for GD (Selvaggi et al., 2012). It is estimated that approximately 1:30,000 adult males and 1:100,000 adult females seek SRS (Sutcliffe et al., 2009). For male-to-female transgender, SRS consists of the elimination of the male sexual organs (bilateral orchiectomy and penile disassembly), and the creation of a neovagina, repositioning of urethral meatus, and clitorolabioplasty. In order to maintain the erogenous sensation, a neurovascular bundle graft is created when disassembling the penis.

Non-oncogenic HPV types, especially HPV 6 and 11, are responsible for up to 90% of genital warts in men and women, its infection prevalence is similar in both sexes, and thus, it should be the same among transsexuals. Some studies that evaluate HPV infection prevalence and its distribution in male anogenital sites, indicate that HPV detection among biological men is highest at the penile shaft, followed by the glans penis/coronal sulcus, and the scrotum, whereas HPV detection is lower in the perianal area, the anal canal and the urethra (Nielsen et al., 2007). During male to female SRS using the inverted penile skin technique, the neovagina is covered with the skin of the inverted penis; the clitoris is constructed with a portion of the glans and its neurovascular bundle, labia minora with the prepuce, and the labia majora with the skin of the scrotum (Wangjiraniran et al., 2015). Considering that the tissue that is used during MTF-SRS are the most likely to be HPV positive, it could be possible to see an increase in vulvar condylomatosis and neovaginal dysplasia after SRS in the near future. Currently, there is no data on the recommended treatment of vulvar condylomatosis after MTF-SRS. We found five documented cases in which HPV-related warts developed in the genital site following gender reassignment surgery. However, all of them were localized in the neovagina, and were treated with chemical agents such as podophyllin, or ablative methods such as cryotherapy or electrocautery. One study reported a complete response of neovaginal condyloma acuminata using CO₂ laser followed by topical application of imiquimod (Matsuki
et al., 2015). We did not find in the literature cases of HPV-related warts developing in the labia majora after SRS, but we consider that, as imiquimod cream can be self-applied by the patients and is not painful, it can be an option for treating vulvar warts in transsexuals. What is more, it is well known that imiquimod cream is beneficial in both treating and preventing recurrent warts. Based on the complete response documented in our patient, we propose that imiquimod treatment may be equally effective in transsexual individuals presenting with vulvar condylomastosis as it is in biological women.

Our patients are routinely counseled after SRS on sexual life with the new organ, intercourse safety and warning signs for sexually transmitted diseases. Moreover, a proper and thorough physical examination of the vulva, perianal region and neovagina is performed regularly. We consider that a speculum examination should be performed at each yearly visit to evaluate the skin of the inverted penis, in order to detect penile intraepithelial neoplasia. We do not consider that routine HPV testing or a Pap smear should be offered. However, we believe that it is important for the female transsexual to visit a gynecologist so as to reinforce her female role.

We believe that gynecologists should be prepared to face an incidence peak of neovaginal-related disorders in this group of patients, in view of the increasing number of FTM SRS performed worldwide. A multidisciplinary team is crucial for the appropriate assessment of the transsexual community, and future research is necessary for the approach of specific diseases in this group of patients.

Conflict of interests

The authors report no conflict of interest.

Informed consent

We had the patient’s informed consent to present with confidentiality this case and her genital pictures.

References

Beutner, K.R., Reitano, M.V., Richwald, G.A., Wiley, D.J., 1998. External genital warts: report of the American Medical Association Consensus Conference. AMA Expert Panel on External Genital Warts. Clin. Infect. Dis. 27 (4):796–806. http://www.ncbi.nlm.nih.gov/pubmed/9798036 (Accessed February 28, 2017).

Giuliano, A.R., Lu, B., Nielson, C.M., et al., 2008. Age-specific prevalence, incidence, and duration of human papillomavirus infections in a cohort of 2901 US men. J Infect. Dis. 198 (6):827–835. http://dx.doi.org/10.1086/591095.

Ingles, D.J., Pierce Campbell, C.M., Messina, J.A., et al., 2015. Human papillomavirus virus (HPV) genotype- and age-specific analyses of external genital lesions among men in the HPV Infection in Men (HIM) Study. J Infect. Dis. 211 (7):1060–1067. http://dx.doi.org/10.1093/infdis/jiu587.

Matsuki, S., Kusukake, K., Hein, K.Z., Anraku, K., Morita, E., 2015. Condylomata acuminata in the neovagina after male-to-female reassignment treated with CO2 laser and imiquimod. Int. J. STD AIDS 26 (7):509–511. http://dx.doi.org/10.1177/0956462414542476.

Nielson, C.M., Flores, R., Harris, R.R., et al., 2007. Human papillomavirus prevalence and type distribution in male anogenital sites and semen. Cancer Epidemiol. Biomark. Prev. 16 (6):1107–1114. http://dx.doi.org/10.1158/1055-9965.EPI-06-0997.

Selvaggi, G., Dhejne, C., Landen, M., Elander, A., 2012. The 2011 WPATH standards of care and penile reconstruction in female-to-male transsexual individuals. Adv. Urol. 2012:581712. http://dx.doi.org/10.1155/2012/581712.

Sutcliffe, P.A., Dixon, S., Akehurst, R.L., et al., 2009. Evaluation of surgical procedures for sex reassignment: a systematic review. J. Plast. Reconstr. Aesthet. Surg. 62 (3):294–306. http://dx.doi.org/10.1016/j.bjps.2007.12.009.

Wangiraniran, B., Selvaggi, G., Chokronsivannont, P., Jindarak, S., Khubunsongserm, S., Tiewtranon, P., 2015. Male-to-female vaginoplasty: Preecha’s surgical technique. J. Plast. Surg. Hand Surg. 49 (3):153–159. http://dx.doi.org/10.3109/2000656X.2014.967253.