



Gonorrhoea of the sigmoid neovagina in a male-to-female transgender

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Abstract

A 33-year-old male-to-female transgender consulted our outpatient clinic with perineovaginal bleeding during and following coitus. Four years before, she underwent a total laparoscopic sigmoid neovaginoplasty. Physical, histological and endoscopic examination revealed neither focus of active bleeding nor signs of active inflammation. A polymerase chain reaction test performed on a neovaginal swab showed gonococcal infection. Treatment consisted of 500 mg intramuscular ceftriaxone. Three weeks later, our patient reported resolution of symptoms, consistent with eradication of *Gonococcus Neisseria* demonstrated by a follow-up neovaginal swab polymerase chain reaction. To our knowledge, this is the first case report of gonococcal infection of the sigmoid neovagina.

Keywords

Gonorrhoea (*Neisseria gonorrhoeae*), surgery, diagnosis, high-risk behaviour, sexual behaviour, SRS, intestinal neovagina, MtF transsexuality, gender surgery

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Introduction

Neovaginoplasty is the surgical construction of a vagina that previously did not exist. In sigmoid neovaginoplasty, a segment of the sigmoid colon is isolated on its vascular pedicle and transferred caudally into a dissected pouch between bladder and rectum to form the neovaginal cavity.¹ The labia minora are constructed out of penile preputial skin, the labia majora out of scrotal skin. The sigmoid neovagina has some supposed advantages when compared to other methods, such as penile inversion. It provides good depth and appearance, self-lubrication and it has little tendency to shrink, which means that there is no need for recurrent and long-lasting (self)dilatation.^{1,2} Neovaginoplasty enables patients to engage in neovaginal penetrative sexual intercourse. The intestinal mucosa consists of columnar epithelium, which is more fragile than vaginal squamous epithelium. This is one of the postulated reasons that unprotected anal intercourse presents a higher probability of sexually transmitted disease (STD) contraction compared to vaginal intercourse.³ The sigmoid neovagina might be even more prone, due to insufficient nutritional supply for the diverted colonic cells which leads to inflammation and higher mucosal leakage.⁴ To

our knowledge, this is the first report of a case of gonococcal infection of the sigmoid neovagina.

Case presentation

A 33-year-old male-to-female (MtF) transgender without co-morbidities presented with perineovaginal bleeding during and following coitus. The bleeding also occurred during and after neovaginal dilatation. She reported no other symptoms. She was sexually attracted towards men and sexually active with multiple different partners, mostly without using condoms. She was not active in commercial sex work. As hormonal

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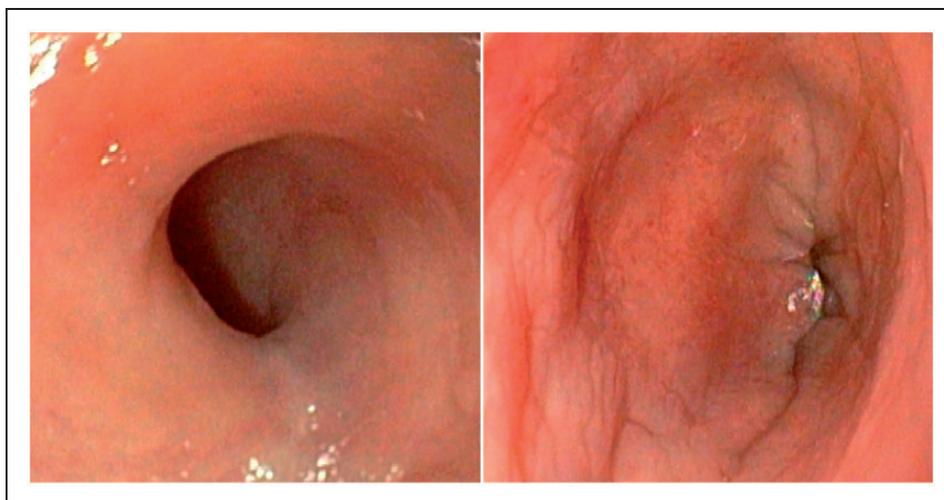


Figure 1. Endoscopic examination of the sigmoid neovagina. The mucosal lining has a normal aspect. There are no signs of active inflammation, laceration or diversion colitis.

therapy estradiol and cyproterone were used. At the age of 27, she attended our third-line referral centre, being the only Dutch Knowledge Centre on Gender Dysphoria, to start with the gender transition process.⁵ Between the age of 27 and 30, she underwent a bilateral breast augmentation using silicone prostheses, multiple feminizing bony facial corrections and a total laparoscopic sigmoid neovaginoplasty.

At physical examination, there was no neovaginal discharge, a normal amount of mucus, no malodor and no lacerations of the external genitalia. The speculum examination caused no discomfort. There were no signs of inflammation, infection or active bleeding. The insertion depth of the neovagina was 17 cm. After examination, some blood was noticed on the speculum. The neovaginal pH was 9.0. A neovaginal endoscopy, performed and evaluated by an expert gastro-enterologist, showed a normal vascular pattern and no signs of active bleeding, erythema or infection, Figure 1. During endoscopy, random mucosal neovaginal biopsy specimens were obtained. At histopathological examination, normal mucosa without signs of active inflammation or crypt abnormalities was observed. There were minimal chronic inflammation and fibrosis, Figure 2. A polymerase chain reaction (PCR) test performed on a neovaginal swab showed absence of chlamydial DNA but presence of gonococcal DNA.

Differential diagnosis of perneovaginal bleeding in MtF transgenders with a sigmoid neovagina comprises diversion colitis, mucosal atrophy, STD, traumatic contact, such as in aggressive sexual intercourse, polyps, carcinoma, inflammatory bowel disease, coagulation disorders and post-operative bleeding. With a positive PCR test for gonococcal infection, we diagnosed gonorrhoea of the sigmoid neovagina. As treatment, 500 mg ceftriaxone, a third-generation cephalosporin

antibiotic, was administered intramuscularly. Three weeks later, the perneovaginal bleedings had stopped. A neovaginal swab excluded on-going presence of gonococcal infection. We provided sexual education and emphasised the necessity of condom use for HIV and STD prevention.

Discussion

Gonorrhoea is sexually transmitted as mucosal infection by *Neisseria gonorrhoeae*. In biological women, vaginal gonococcal infection is mostly asymptomatic, but may present with vaginal discharge, painful or burning urination, abdominal pain, dyspareunia, intermenstrual bleeding or pruritus. Rectal gonorrhoea infection is asymptomatic in 50% of men and 95% of women, but may present with bloody or mucopurulent discharge, pruritus or abdominal or local pain.⁶ Symptomatic rectal infection is manifest by bloody or mucopurulent discharge, pruritus or abdominal or local pain. To diagnose gonococcal infection of the rectum or genital tract, the use of a nucleic acid amplification test is recommended as the optimal method in patients with or without symptoms.⁷

HIV and STDs have regularly been reported in MtF transgenders, but mostly in the (non-western) commercial sex industry and pre-dominantly in the penile skinned neovagina.⁸⁻¹⁴ As a group, MtF transgenders exhibit high-risk behaviour for exposure to HIV and STDs in Latin-American, North-American and Asian research.⁸ It has been reported that STD-attractants – as did our patient – frequently engage in unprotected sexual activities, because they are uncomfortable using a condom and condom negotiation is difficult for them.¹⁵ STD prevalence among transgenders is low in Caucasian Americans and high among Hispanics and

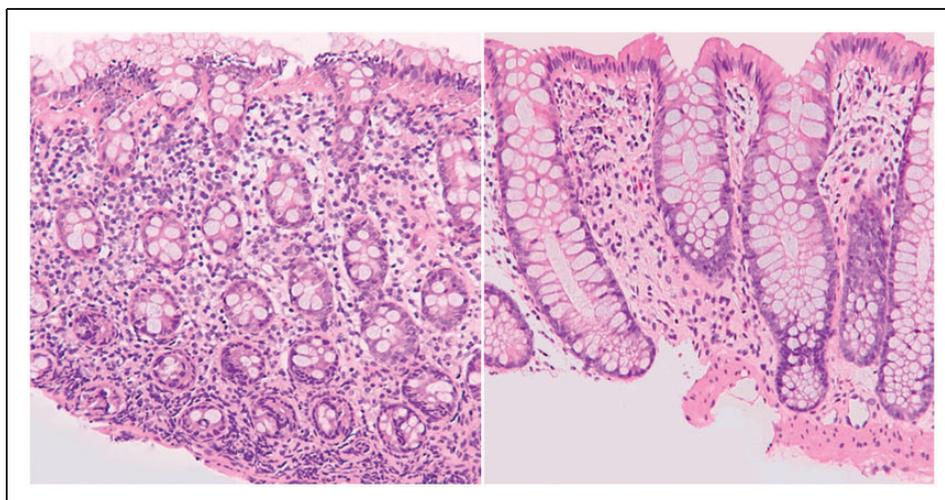


Figure 2. Histological examination of the sigmoid neovagina (left) and rectum (right). H&E stained biopsies show colonic-type mucosa with a regular pattern of crypts. There is no active inflammation. There is minimal increase of plasma cells and lymphocytes.

African Americans.¹⁰ Participation in sex work is a major risk factor for STD exposure, obviously due to intercourse with multiple partners with unknown HIV and STD history.⁹ This has also been shown for MtF transgender sex workers in the Netherlands, although the incidence and prevalence of STDs in the MtF transgender group as a whole is unknown.¹⁶ Although the sigmoid neovagina in MtF transgenders is an artificial vagina, it is still prone to STD contraction. Possibly, even more when compared to the biological vagina, due to its more fragile epithelium and higher mucosal leakage. This case is the first report of gonococcal infection of the sigmoid neovagina to our knowledge.

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Conflict of interest

The authors declare no conflict of interest.

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