

# Severe Genital Tract Infection and Hymenal Disruption Associated With Chronic Masturbatory Practices in an Adolescent Undergraduate: A Case Report

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## ABSTRACT

**Background:** Severe genital tract infection resulting from chronic masturbatory practices involving vaginal foreign-body insertion is rarely reported among adolescents.

**Case Presentation:** An 18-year-old undergraduate presented with a 3-month history of recurrent foul-smelling vaginal discharge and lower abdominal pain that persisted despite multiple courses of antibiotics. Although she initially denied sexual activity, a confidential consultation revealed chronic and vigorous masturbation since age 16, involving digital stimulation and repeated vaginal insertion of spoons, combs, and sticks. Pelvic examination demonstrated severe genital tract infection with hymenal disruption secondary to foreign-body insertion.

**Management and Outcome:** She was successfully managed with broad-spectrum antibiotics, supportive care, and comprehensive psychological, sexual, and reproductive health counselling, resulting in complete clinical resolution.

**Conclusion:** This case emphasizes the importance of confidential adolescent-friendly care, careful evaluation of persistent genital symptoms, and comprehensive sexuality education in preventing and managing avoidable reproductive health complications among adolescents.

**Keywords:** Adolescent; Masturbation; Foreign-body insertion; Genital tract infection; Hymenal disruption; Sexuality education

## INTRODUCTION

Masturbation is a common sexual behaviour across the lifespan and is generally regarded as a normal component of psychosexual development in adolescents and young adults. In most individuals, it is not associated with significant physical harm and may contribute to sexual self-awareness and well-being<sup>[1]</sup>. However, when genital stimulation involves repetitive vigorous manipulation, insertion of objects or practices resulting in tissue trauma, local complications may occasionally occur. These complications can include genital pain, abrasions, lacerations, bleeding, infection and, in rare circumstances, more severe injuries involving the vulva, vagina or hymenal tissue.

Genital trauma in adolescent females represents a relatively uncommon but important clinical entity<sup>[2]</sup>. The causes are diverse and include accidental injuries, sports-related trauma, sexual activity, sexual assault, self-

inflicted injury and other forms of genital manipulation. The rich vascularity of the female genital tract predisposes injured tissues to bleeding, inflammation, secondary infection and, occasionally, significant morbidity when diagnosis or treatment is delayed.

The hymen is a variable anatomical structure whose appearance differs considerably among individuals and may be influenced by age, hormonal status, physical activities, trauma and genital instrumentation. Contemporary evidence demonstrates that hymenal findings alone are neither reliable indicators of sexual activity nor definitive markers of the mechanism by which injury occurred<sup>[3]</sup>. Consequently, careful clinical evaluation and contextual interpretation of genital findings are essential.

Published literature on severe genital tract infection occurring in association with chronic masturbatory practices is scarce, particularly among adolescents in low- and middle-income countries. Reports describing concomitant hymenal disruption and severe genital infection attributable to repetitive self-genital manipulation are especially uncommon. This case report describes an adolescent undergraduate who presented with severe genital tract infection and hymenal disruption in the setting of chronic masturbatory practices. The report highlights important diagnostic, clinical, psychosocial and adolescent health considerations, while emphasizing the need for comprehensive, non-judgmental sexual health assessment and timely medical intervention in young people presenting with genital complaints.

### **Patient and management**

An 18-year-old undergraduate from a university in southwestern Nigeria presented to the adolescent gynaecology unit, accompanied by her mother. She reported a 3-month history of recurrent, foul-smelling vaginal discharge and progressive lower abdominal pain. Prior to her presentation, she had received multiple courses of antibiotics from various external healthcare facilities without any significant clinical improvement.

During the initial presentation in the presence of her mother, the patient asserted that she was a virgin and had never engaged in sexual activity. However, during a subsequent confidential consultation (after her mother was respectfully excused from the room), she disclosed to the adolescent gynaecologist and counsellor that she had been engaging in chronic and vigorous masturbation since the age of 16. This practice involved digital vaginal stimulation as well as the recurrent insertion of relatively hard foreign objects, including spoons, combs and sticks. She confirmed that she had never engaged in penetrative sexual intercourse with a partner, and that these practices were largely influenced by information she had obtained from social media platforms. Due to deep-seated fear and social stigma, she had been highly reluctant for her mother to discover the underlying cause of her symptoms.

On clinical evaluation, significant findings included a temperature of 39°C, moderate lower abdominal tenderness, a foul-smelling brownish vulvovaginal discharge and hymenal disruption (non-intact hymen). Speculum examination revealed copious foul-smelling mucopurulent discharge coating the vulva and pooling within the vaginal canal. The cervix appeared inflamed, oedematous and friable, with a purulent external cervical os actively discharging purulent material. Bimanual pelvic examination demonstrated marked cervical motion tenderness and bilateral adnexal tenderness. A provisional diagnosis of severe foreign-body-induced genital tract infection with pelvic inflammatory disease on the background of hymenal disruption secondary to chronic masturbatory practices was made.

The patient's condition, its likely aetiology, potential complications and treatment options were thoroughly explained to both the patient and her mother, emphasizing the need for admission and comprehensive multidisciplinary care. A series of laboratory and ancillary investigations were undertaken, including serological screening for human immunodeficiency virus (HIV), syphilis, and hepatitis B and C infections. All serological results were non-reactive, with no evidence of concomitant systemic infection. However, endocervical swab culture yielded *Escherichia coli*, which was sensitive to levofloxacin. Ultrasonographic findings were normal.

The patient was admitted and treated with a tailored regimen of broad-spectrum antibiotics, including

levofloxacin, alongside analgesia, genital hygiene measures and other supportive interventions. Progressive clinical improvement was observed, with complete resolution of the vaginal discharge and pelvic pain.

Beyond antimicrobial therapy, comprehensive psychological support and counselling formed an integral part of her management. She received education on genital hygiene, the anatomical and infectious risks associated with vaginal insertion of foreign objects and safer approaches to adolescent sexual health. Her concerns regarding future sexual satisfaction, fertility and genital integrity were addressed with appropriate clinical reassurance. In addition, she received broader reproductive health education covering sexually transmitted infections, prevention of unintended pregnancy, the dangers of unsafe abortion, healthy relationships, life and family planning. She was discharged in stable condition following complete clinical recovery, with scheduled follow-up visits for continued monitoring, reinforcement of health education and ongoing psychosocial support.

## DISCUSSION

This case highlights an uncommon but clinically significant cause of genital tract infection in adolescents; recurrent vaginal insertion of foreign objects during masturbatory practices. While masturbation itself is generally regarded as a normal aspect of adolescent psychosexual development, complications may occur when it involves vigorous genital manipulation or the insertion of foreign bodies, resulting in trauma, infection, bleeding, and long-term reproductive morbidity<sup>[4]</sup>.

The patient's presentation with persistent foul-smelling vaginal discharge and lower abdominal pain despite repeated antibiotic treatment is consistent with previous reports showing that retained or repeatedly inserted vaginal foreign bodies often present with chronic discharge, pelvic discomfort, recurrent infection and failure to respond to conventional therapy<sup>[5]</sup>. Such cases are frequently misdiagnosed until a detailed history and genital examination are undertaken.

A particularly important aspect of this case was the discrepancy between the initial history obtained in the presence of the patient's mother and the information disclosed during a confidential consultation. The World Health Organization emphasizes that adolescents are more likely to reveal sensitive information when interviewed privately in a non-judgmental and confidential environment<sup>[6]</sup>. Failure to create such an environment may delay diagnosis and appropriate management. This case, therefore, reinforces the central role of adolescent-friendly healthcare services in achieving accurate diagnosis and effective treatment.

The influence of social media on the patient's behaviour is also noteworthy. Emerging reports have documented cases in which adolescents engaged in vaginal foreign-body insertion after exposure to online content; although the current evidence is limited largely to case reports and observational studies, growing concerns exist regarding the dissemination of inaccurate sexual health information through unregulated digital platforms<sup>[7,8]</sup>.

Another important lesson from this case relates to the interpretation of hymenal findings. Hymenal disruption should not automatically be equated with consensual or non-consensual sexual intercourse. Trauma from foreign-body insertion, medical procedures, accidental injuries and other non-coital mechanisms can also result in hymenal injury. Consequently, clinicians should avoid assumptions and base conclusions on a comprehensive clinical assessment and careful history-taking.

Management of the patient extended beyond antimicrobial therapy; comprehensive counselling addressed genital hygiene, digital health literacy, reproductive health and psychosocial concerns. Evidence consistently demonstrates that comprehensive sexuality education improves sexual health knowledge, promotes safer behaviours and reduces vulnerability to misinformation<sup>[9]</sup>.

## CONCLUSION

This case illustrates that foreign-body-associated genital tract infection should be considered in adolescents presenting with persistent genital symptoms, particularly when standard treatment fails. It further underscores

the importance of confidential adolescent-friendly care, comprehensive sexuality education and parental engagement in promoting healthy adolescent development and preventing avoidable reproductive health complications.

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### Conflict of interest

The authors declare no conflict of interest.

### Author's contribution

All authors participated in the clinical management of the patient. The manuscript was conceptualized and drafted by Ogidan O.C. and Olofinbiyi R.O., while Olofinbiyi B.A. critically reviewed, revised and approved the final version of the manuscript for publication.

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