Diagnosis and Management of Complex Genital Warts: Case Report

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Abstract

Introduction: This case reports a pregnancy complicated by condyloma acuminata with co-infection of HIV and tuberculosis (TB). Such a combination is rarely documented and presents significant clinical and therapeutic challenges. This case aims to demonstrate the effectiveness of a simple surgical approach in managing extensive condyloma acuminata during high-risk pregnancy.

Case Presentation: A 24-year-old pregnant woman was diagnosed with condyloma acuminata along with confirmed HIV and TB co-infection. Electrocauterization was performed successfully, leading to complete lesion removal and significant improvement in wound healing, with no early recurrence observed. The pregnancy was planned to be delivered by cesarean section.

Conclusion: This case demonstrates that, even with multiple comorbidities and a high-risk pregnancy, simple surgical treatments like electrocauterization can be both safe and effective. Early multidisciplinary intervention is crucial for achieving the best maternal outcomes.

Keywords: Condyloma acuminata; pregnancy; HIV; tuberculosis

Diagnosis dan Penatalaksanaan Kondiloma Genital dengan Komplikasi: Laporan Kasus

Abstrak

Pendahuluan: Laporan kasus ini membahas kehamilan yang disertai komplikasi berupa kondiloma akuminata dengan ko-infeksi HIV dan tuberkulosis (TB). Kombinasi tersebut jarang didokumentasikan dan menimbulkan tantangan klinis serta terapeutik yang signifikan. Kasus ini bertujuan untuk menunjukkan efektivitas pendekatan bedah sederhana dalam menangani kondiloma akuminata ekstensif pada kehamilan risiko tinggi.

Presentasi Kasus: Seorang wanita hamil berusia 24 tahun didiagnosis menderita kondiloma akuminata dengan ko-infeksi HIV dan TB terkonfirmasi. Tindakan elektrokauter berhasil dilakukan dengan hasil berupa pengangkatan lesi secara menyeluruh dan perbaikan yang nyata pada penyembuhan luka, tanpa adanya kekambuhan dini yang teramati. Kehamilan direncanakan untuk dilahirkan dengan operasi sesar.

Kesimpulan: Kasus ini menegaskan bahwa dalam konteks komorbiditas multipel dan kehamilan risiko tinggi, penatalaksanaan bedah sederhana seperti elektrokauter dapat aman dan efektif. Intervensi multidisiplin sejak dini sangat penting untuk mencapai luaran maternal yang optimal.

Kata kunci: HIV: Kehamilan; kondiloma akuminata; tuberkulosis

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Introduction

Condyloma acuminata (CA), or genital warts, is a benign lesion primarily caused by human papillomavirus (HPV) types 6 and 11, and it is commonly transmitted through sexual contact. The condition tends to be more severe and persistent in immunocompromised states such as HIV infection, tuberculosis (TB), and pregnancy, where lesions tend to grow larger, recur frequently, and respond poorly to treatment.[1,2] The coexistence of CA with both HIV and TB during pregnancy is extremely rare, with limited reports in the literature. Such cases present significant challenges in diagnosis and management due to the combined effects of immune suppression and pregnancy-related physiological changes.[3] Here, we report a case of a pregnant woman with CA and co-infection with HIV and TB who was successfully treated with electrocauterization, achieving complete healing without early recurrence.[4] This report aims to highlight the safety and feasibility of simple surgical intervention in high-risk pregnancies with multiple comorbidities.

Case

A 24-year-old woman came to the Polyclinic with complaints of a lump in her vagina that had been enlarging for the past year. Initially, the lump resembled a pimple, then it pressed and bled. There was no pain or pus. However, the patient reported feeling itchy. She also complained of thick, fishy-smelling vaginal discharge for the past four months. Two months ago, she was diagnosed as HIV positive and started on ARV therapy. The patient also has pulmonary TB and is undergoing OAT treatment. She has been married for one year. In January 2024, she gave birth naturally at the midwife's clinic to a girl at 7 months of gestation with a birth weight of 2200 grams. The patient is not breastfeeding and does not use contraception. She is pregnant with her second child at 12 weeks of gestation. The patient has been working as a commercial sex worker for the past year.

On physical examination, a lumpy mass was observed, with no active bleeding. Vital signs are normal. During a thorough

Figure 1 24 years old, female (G2P1A0) presented with multiple huge exophytic masses, cauliflower-like in appearance, pink and grayish in colour involving both labia majora and minora. They were measured 4x2x2 cm on the vulva and 3x1x2 cm on the perineum

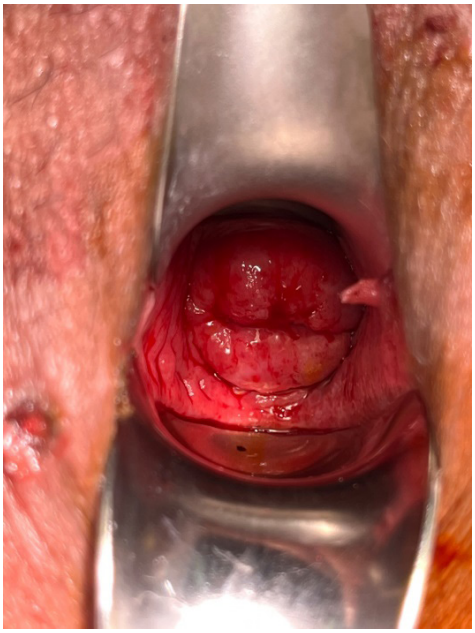

Figure 2 Inspeculo Examination Showns the Condyloma Acuminata Lesion Does Not Extend to The Cervix

Figure 3 Intraoperative Condyloma Acuminata Cauterization

and meticulous inspection (inspeculo examination), it becomes evident that the lesion related to the condyloma acuminata does not extend further in depth within the affected tissue until it reaches the anatomical region called the cervix, the lower part of the uterus that connects to the vagina.

Ultrasonography examination showed a single fetus with a regular heart rate, a healthy placenta, and sufficient amniotic fluid, indicating the fetus's condition was good. Histology results from anatomical pathology confirm the presence of condyloma acuminata. The patient is scheduled for excision of the condyloma with cauterization.

Following the initial procedure, a weekly assessment was conducted to evaluate the progress of the post-surgery wound and the potential development of additional lesions. The assessment during the first two weeks showed a positive healing trend of the post-operative wound with no signs of secondary infection. The lesion of GCA was successfully excised, and the patient's partner was instructed to use a condom during sexual activity to prevent relapse, as well as to undergo examination with the patient's husband.

Table 1 Timeline of Events from Initial Symptom Onset

Date / Timeframe	Event / Finding	Notes
Jan 2023	Initial appearance of a small pimple-like lump in vaginal area, later enlarged and bled	No pain, itching present
Sept 2023	Onset of thick, fishy-odor vaginal discharge	Persistent
Nov 2023	Diagnosed with pulmonary TB, started anti-TB regimen (OAT)	Sputum BTA positive, GeneXpert MTB detected
Dec 2023	Diagnosed with HIV-positive, started ARV therapy	CD4 count: 350 cells/mm³, HIV viral load: 200 copies/mL
Jan 2024	First pregnancy ended in preterm delivery at 7 months via vaginal birth (BW 2200g)	No CA treatment given
Mar 2024	Second pregnancy confirmed (GA 12 weeks at presentation)	ANC follow-up initiated
Apr 2024	Presented to clinic with large CA lesions; histopathology confirmed condyloma acuminata	Planned for electrocauterization
Apr 2024	Electrocautery excision performed	Monopolar electrocautery, local infiltration anesthesia (lidocaine 1%), procedure ~35 min
Apr–May 2024	Weekly follow-up showed good wound healing without secondary infection or recurrence	Partner received condom-use counseling

Discussion

This case presents a unique and challenging scenario: condyloma acuminata (CA) in pregnancy complicated by co-infection with HIV and tuberculosis (TB). Each of these conditions alone can significantly impact maternal health, but their coexistence increases the complexity of clinical decision-making. Immunosuppression caused by HIV infection impairs the body's ability to control HPV replication, resulting in more extensive, persistent, and recurrent lesions. TB infection further weakens the immune system, leading to slower wound healing and higher risk of secondary infections. Additionally, pregnancy itself causes a state of relative immunosuppression, fostering an environment where lesions can grow rapidly and recur more frequently. The patient's occupational history as a commercial sex worker, involving multiple sexual partners, was a major risk factor for acquiring HPV and HIV.

The presence of large, exophytic CA lesions during pregnancy is more than just a cosmetic issue. Bulky lesions can obstruct vaginal delivery, raise the risk of perineal trauma, and facilitate vertical transmission of HPV.[5] Previous research indicates that vertical transmission rates of HPV 16/18 can reach up to 39.7% in infants born vaginally, with possible outcomes like laryngeal papillomatosis. HPV infection during pregnancy has also been linked to adverse obstetric results, including placental problems, spontaneous preterm birth, and low birth weight. In this patient's first pregnancy, preterm delivery occurred in the context of untreated CA, emphasizing the importance of early and effective intervention in subsequent gestations.[6,7]

Several therapeutic options are available for managing CA in pregnancy, each with specific efficacy and safety considerations (Table 1).[8,9] Cryotherapy is effective and well tolerated in all trimesters, with low recurrence rates, but may require multiple sessions and is less efficient for large lesions. CO_2 laser ablation offers similar efficacy to electrosurgery and allows precise tissue destruction with minimal thermal spread, but it requires specialized equipment, longer operative times, and carries a risk of scarring or pigmentary changes.[10,11] Topical imiquimod can be effective for extensive lesions but requires informed consent due to limited data in pregnancy and prolonged treatment courses.[12] Electrosurgery, the modality chosen for this patient, has high clearance rates (77–97%), offers immediate lesion removal, and is associated with minimal bleeding, which is an important factor in the hypervascular genital tissues of pregnancy.[13,14]

Given the patient's gestational age

Table 2 Comparison of Treatment Options for Condyloma Acuminata during Pregnancy

Treatment Modality	Efficacy	Safety Consideration
Electrosurgery	High clearance rates (77-97%)	Minimal bleeding, low risk infection, suitable for all trimesters
Cryotherapy	Effective with low recurrence rates	Safe and well-toleranted, suitable for all trimesters
CO2 Laser Ablation	Similar efficacy to electrosurgery	Longer operative times, risk of scarring and vitiligo
Imiquimod	Effective for extensive lesions	Requires informed consent, no severe adverse effects reported

(12 weeks), lesion size, and comorbidities, electrosurgery was chosen to achieve rapid clearance before further lesion growth or obstetric complications occurred. This method allowed for a single-session treatment, minimized prolonged anesthesia exposure, and lowered the risk of significant intraoperative bleeding when performed with careful technique. The procedure was well tolerated, and postoperative healing was smooth, with no recurrence observed during the early follow-up. Compared to the patient's first pregnancy, when no definitive CA treatment was provided, the current approach reduced the risk of peripartum complications and supported planning for a cesarean section to lower the risk of vertical HPV transmission further.[15]

In patients with HIV, CA lesions are often more widespread and resistant to treatment, with higher recurrence rates despite antiretroviral therapy. This is due to ongoing immune dysregulation and HPV's ability to escape immune surveillance. TB co-infection further strains the patient's physiological reserves, potentially delaying postoperative recovery. A multidisciplinary approach involving obstetricians, infectious disease specialists, and anesthesiologists was essential for optimizing perioperative safety. Prophylactic measures to lower infection risk, careful anesthesia planning, and postoperative wound monitoring were crucial steps in preventing complications in this immunocompromised patient.[13,15]

The main strength of this case lies in its rarity and the successful demonstration of a straightforward surgical approach in a high-risk setting. It provides practical evidence supporting electrosurgery as a safe and effective option for managing bulky CA in pregnancy with dual infections. However, limitations include the absence of long-term follow-up beyond the early postpartum period and the lack of neonatal HPV testing, which could have provided further data on vertical transmission outcomes.[16] When performed with appropriate precautions, electrocautery can be a safe, effective, and practical intervention for extensive CA in high-risk pregnancies with multiple infections. Early decisive treatment and coordinated multidisciplinary care are crucial to maximize maternal and neonatal outcomes.

Conclusion

The cauterization performed on a 24-year-old G2P1A0 woman, at 12 weeks of gestation, with a large condyloma acuminatum and co-infection with HIV and TB, resulted in clinical recovery. The pregnancy is planned to be delivered by cesarean section. In comparative analysis, electrosurgery shows a higher success rate and a lower recurrence rate compared to other treatments. However, it is important to note that electrosurgery is associated with more significant adverse side effects, such as hemorrhagic complications, which are more commonly seen with electrosurgical procedures than with treatments like TCA.

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