Giant Condyloma Accuminata in Pregnancy, Use of Trichloroacetic Acid combined with electrocauterization and excision Procedure: A Case Report

Riyana Noor Oktaviyanti[1], Putri Cinthya Ismihari[1]

[1]*Departement of Dermatology and Venereology, Karsa Husada Batu General Hospital*

Corresponding author:
Riyana Noor Oktaviyanti
Address: Jl. Ikan piranha no 21, Malang, East Java, Indonesia
Telephone: +628350071989
Email address: oktavianti17@gmail.com

Abstract

Condyloma acuminata is a sexually transmitted disease caused by the Human Papilloma Virus (HPV). During pregnancy, condyloma acuminata can proliferate rapidly due to changes in immunity and increased blood supply. One of the safest therapeutic modalities is trichloroacetic acid (TCA). Electrocautery is another modality in pregnant patients. Case illustration: A 16-year-old woman, 6-months pregnant, complained of a wart-like lump in the pubic area getting more prominent since the last two weeks and covering the vagina surface. The lump is not itchy and painless. From history-taking it was found that patient often changes partners. On physical examination, the lesions were multiple papules with a verrucous surface. The results of the work-up showed a positive acetowhite test. Patients are then treated with a TCA of 80-90% during pregnancy and followed by electrocautery and excision during cesarean section. Results: The results of 80-90% TCA treatment followed by electrocautery and excision were satisfactory, and there were no recurrences when the patient went for a follow-up. Discussion: TCA is a substance that is caustic and can erode skin and mucous membranes. TCA works by coagulation of proteins which causes dryness of cells and tissues. TCA is safe for pregnant women. Conclusion: Combination of TCA 80-90% with electrocautery and excision, in this case, proved to be effective with no sign of recurrence. Conclusion: The combination of TCA therapy with electrocautery and excision has proven effective and safe for pregnant patients.
Keywords: Condyloma acuminata, pregnant women, TCA, excision, electrocautery

Introduction: Condyloma acuminata (CA) or better known by the general public as genital warts or chicken's comb disease, is classified as a sexually transmitted disease caused by the Human Papilloma Virus (HPV).[1] More than 120 HPV subtypes are known, but those responsible for the most common CA are subtypes 6 and 11, while subtypes 16 and 18 have an oncogenic tendency to cause cervical malignancy.[2]

The incidence of HPV infection in condyloma acuminata is about 1% in sexually active adults. About 15% of the infected group had a subclinical or latent infection, and at least 80% already infected with one or more genital HPV strains. The highest incidence rate occurs in the adult group aged 18-28 years.[3]

Condyloma acuminata has high infectivity, where the thinner mucosal surface will be more susceptible to viral inoculation than skin with thick keratin. [(1)]. During pregnancy, condyloma acuminata can proliferate rapidly due to changes in immunity and increased blood supply, and these abnormalities can appear in clinical or subclinical forms. The clinical form causes more emotional and physical disturbances to the patient because the mother has to give birth by cesarean section, and if she gives birth spontaneously,

there is a possible risk of HPV contamination in the baby.[1]

The primary therapeutic modality for condyloma acuminata is destructive therapy, such as cauterization, cryotherapy with liquid nitrogen, excision, podophyllin tincture, podophyllin resin, trichloroacetic acid (TCA), injection of bleomycin sulfate, imiquimod cream, and laser vaporization. However, none of these modalities totally effective, and recurrences are common.[1] In pregnant women, not all of the above therapeutic modalities are viable. Therapeutic options that can be given include cryotherapy, electrocautery, laser therapy, and trichloroacetic acid.[4] Of the four therapeutic modalities above, TCA does not require special equipment because it can be applied directly over the lesion, making it easy to use and cheaper. Based on the Centers for Disease Control and Prevention (CDC) 2010, the TCA concentration used for condyloma therapy is 80% - 90%, but several case reports are stating the success of therapy with a TCA of 50%. [5,6] The management of condyloma acuminata requires considering the patient's lesion number, area, location, and condition. In pregnant women, the management of condyloma acuminata must consider the mother and the foetus's safety. One of the safe therapeutic modalities for pregnant women based on the Centers for Disease Control and Prevention (CDC) 2010 is trichloroacetic acid (TCA) 80% - 90%, but several case reports are stating the success of therapy with TCA 50%. Combination with cautery and excision increases the success rate of therapy.[7]

Case Illustration:

An unmarried 16-year-old woman, six months pregnant, came with a complaint of having a wart-like lump in the pubic area 2 weeks ago. This woman had never experienced this complaint before. Initially, warts appear a little on the lips of the genitals and then multiply and get bigger until they cover the vagina. Warts are not painful or itchy and do not bleed.

The patient has a history of frequent sexual intercourse with multiple partners. It is not known whether the patient's partner also complained about the same thing. Every time the patient has sexual intercourse, the patient's partner does not use a condom. On physical examination, there were multiple solitary papule lesions and several confluent papules with the surface of the verrucose on the labia majora, labia minora, and outer vaginal wall. The patient has a positive acetowhite test, and the rapid HIV test showed negative results. From the history, physical examination, and work-up, the diagnosis of condyloma acuminata was confirmed. Then the patient is treated with TCA 80-90% up to 4 times of therapy, and the results of the wart/condyloma lesions are successfully removed. Meanwhile, large wart/condyloma lesions were performed electrocautery and excision during the caesarean section.

Figure 1. Before therapy

Figure 2. After being given TCA 80-90% therapy 4 times, before excision and electrocautery

Figure 3. After excision and electrocautery

Figure 4. Two weeks post-excision and electrocautery

Discussion:

Based on Matsunaga's research in 1987, it was explained that condyloma acuminata mainly were transmitted through sexual contact, [(9)] this is in accordance with the patient in this case, where the source of transmission comes from patients who frequently change partners and have sex without using a condom.

The incidence of condyloma acuminata often occurs in young adolescents who are already sexually active, where the highest frequency of infection occurs in the adult group aged 18-28 years. [(3)] The patient was 16 years old, a young adult, and the patient was also sexually active.

The patient in this case was a pregnant patient with a gestational age of 6 months, where based on the study of Essa et al. In 2011, there was a link between condyloma acuminata and pregnancy. Condyloma acuminata can develop more rapidly during pregnancy due to changes in immunity and increased blood supply.[1] HPV infection from mother to baby is rare but

usually can occur vertically during vaginal delivery, so pregnant patients with condyloma acuminata should give birth by caesarean section. Infection from mother to baby can lead to respiratory papillomatosis, resulting in death or life-long morbidity in the child. Extravillary HPV infection can induce cell death and reduce placental invasion, leading to placental dysfunction and spontaneously leading to premature birth.[1] Considering the magnitude of the risk of contracting the infection, this patient underwent a caesarean section delivery.

The choice of condyloma acuminata therapy must consider safety aspects, especially in pregnant women. The recommended therapeutic options for pregnant women are cryotherapy, electrocautery, laser therapy, and trichloroacetic acid. In this case, the therapy used is TCA 80-90%, given during pregnancy four times, followed by electrocautery surgery and excision during caesarean section. Based on the Centers for Disease Control and Prevention (CDC) 2010, 80% - 90% trichloroacetic acid (TCA) is recommended and safe therapies for pregnant women because it is not absorbed systemically.[5,6] TCA's mechanism in condyloma acuminata is by means of protein coagulation, which causes dryness of cells and tissues so that it can result in severe destruction of the condyloma. The success rate of TCA for condyloma therapy is 56-81%, with a recurrence rate of 36%.[10,11]

In this patient, a combination of TCA with electrocautery surgery and excision during caesarean delivery was performed. According to Akhavizadegan in 2015, electrocautery is a type of ablation operation on condyloma that is effective in a short period. The success rate reaches 70% - 80%, with a recurrence rate of up to 25%.[12] Electrocautery and excision in these cases were not performed when the patient was pregnant, and this is in accordance with the theory expressed by Matsunaga in 1987, which proved that electrocautery and excision during pregnancy can cause heavy bleeding in 33% of patients when done during pregnancy, and can cause severe infection and tissue necrosis.[9]

Conclusion:

In such cases, 80-90% TCA administration combined with electrocautery and excision effectively eradicates condyloma acuminata. Giving TCA 80-90% therapy makes the size of the condyloma smaller, then excision and electrocautery are performed during cesarean section so that the condyloma acuminata is removed and does not cause recurrence.

References:

1. Eassa BI, Bakr AA. Intradermal injection of PPD as a novel approach of immunotherapy in anogenital warts in pregnant women. Dermatologic Therapy, 2011; 24: 137–43.
2. Daili SF, Indriatmi W, Zubier F, Nilasari H. Infeksi Menular Seksual, Pedoman Praktis Diagnosis dan Tatalaksana. Kementrian Kesehatan RI. 2015; 29-30.
3. Schwartz DB, Greenberg MD, Daoud Y, Reid R. Genital condylomas in pregnancy: use of trichloroacetic acid and laser therapy. Am J Obstet Gynecol, 1988; 158: 1407-16.
4. Rozmus-Warcholińska W, Loch T, Czuba B, Mazurek U, Mucha J. Genital warts associated with HPV infection during II and III trimester

of pregnancy-a case report and analysis of treatment options., 2007; 78(11): 888-91.
5. Centers for Disease Control and Prevention. Sexually transmitted diseases treatment guidelines. MMWR 2010; 59(No.RR-12): 70-3.
6. Nath D, Kumar B, Sharma KV, Kaur I, Gupta R, Malhotra S. Comparison of podophyllin and trichloroacetic acid for the treatment of genital warts. IJDVL, 1990; 56(1): 22-4.
7. Yenny S. W., Kondiloma Akuminata pada Wanita Hamil: Salah Satu Modalitas Terapi. Jurnal Kesehatan Andalas. 2013; 2(1)
8. Centers for Disease Control and Prevention. Sexually transmitted diseases treatment guidelines. MMWR 2006; 55(No.RR-11): 62-6.
9. Matsunaga J, Bergman A, Bhatta NN. Genital condylomata acuminata in pregnancy: effectiveness, safety and pregnancy outcome following cryotherapy. British Journal of Obstetrics and Ciynaecology, 1987; 94: 168-72
10. Lacey CJN, Woodhall SC, Wikstrom A, Ross J. IUSTI: 2010 European Guideline for the Management of Anogenital Warts in Adults, 2010: 1-18.
11. Scheinfeld N, Lehman DS. An evidence-based review of medical and surgical treatments of genital warts. Dermatology Online Journal 2006; 12 (3): 5.
12. Akhavizadegan H. Electrocautery Resection, Shaving with a Scalpel, and Podophyllin: a Combination Therapy for Giant Condyloma Acuminatum., World J Mens Health., 2015: 39-41