

# Condyloma Acuminata Treated with Combination Therapy of Electrodesiccation and Applying Trichloroacetic Acid

Gilju Yi, MD, Chonghyeok Kim, MD

*Department of Dermatology, Inje University, Seoul, Korea*

There are many methods to treat condyloma acuminata (CA) such as physical destruction or immunotherapy, but they are not always satisfactory, especially when the lesions occur in young children or infants. Two patients, who showed CA on their anal region, were treated by combination therapy of ED and applying TCA, and were evaluated on the efficacy of the therapeutic method. Clinically and pathologically proven CA was treated with a simple combination method. First, the wart lesions were carefully electrodesiccated and swept away. After that, 30% trichloroacetic acid was applied to eroded area. Clinical examination was performed periodically after treatment. Elimination of the CA was successful by one procedure. Complication was not found after treatment. There was no recurrence 1 year later at least. The combination therapy of ED and applying TCA seems to be a very simple, convenient and effective method. (*Ann Dermatol* 13(1) 48-51, 2001).

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*Key Words* : Condyloma acuminata, Combination therapy, Electrodesiccation, Trichloroacetic acid

Condyloma acuminata (CA) is benign proliferation of mucosa that result from infection with human papillomaviruses (HPVs) and represent the most common viral sexually transmitted disease in some areas (1). The spectrum of HPV infection is known from latent to clinical disease and even subclinical lesions are infectious (2). But it is plausible, because visible lesions carry a much greater load of viral particles, that they are significantly more infectious than subclinical infections and thus should be treated (1). There are many methods to treat CA, but the diversity of such treatments is a reflection of the fact that there is as yet no specific therapy for the HPV (3). Here, I

propose a very simple and convenient method to treat CA possibly by one procedure, the combination therapy, that consists of electrodesiccation (ED) and applying trichloroacetic acid (TCA).

## CASE REPORT

Two Korean female patients, one was 2-year-old and the other was 22-year-old, presented for evaluation and treatment of multiple verrucous papules around anal area. The skin lesions of the 2-year-old girl had been present for 2 weeks. There were multiple verrucous papules around anal mucocutaneous junction area (Fig. 1A). Her mother and father denied any verrucous skin lesions on their body. Results of the following laboratory studies were normal or negative: complete blood cell count, urine analysis, urine culture, serologic tests for syphilis, and human immunodeficiency virus. Biopsy of the lesion showed hyperkeratosis, acanthosis, parakeratosis, papillomatosis, and distinct perinuclear vacuolization, suggesting typical CA. Historically, the lesion was considered to have been caused by sexual abuse. At first, the patient had been treated with TCA because of her age and lesion size, but the therapy failed to eliminate the lesion.

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Received May 3, 2000.

Accepted for publication November 8, 2000.

**Reprint request to** : Gilju Yi, M.D., Department of Dermatology, Seoul Paik hospital, 85, 2-ka Jur-dong, Chung-ku, Seoul, 100-032, Korea

Tele-fax : 02-2270-0077

Telephone : 02-2270-0077

E-mail address : giljuyi@hotmail.com

\*\*This case was presented at the 51st annual meeting of the Korean Dermatological Association on October 13, 1999.

**Fig. 1.** 2-year-old patient with verrucous papules around the anus in case 1. A) Before treatment. B) 1 year after the combination therapy of electrodessication and applying 30% trichloroacetic acid.

The one-time treatment was designed because she was difficult to cooperate because of her age. The patient was lithotomy-positioned under general anesthesia and electrodessicated with electrosurgical unit (ellman Surgitron F.F.P.F., Ellman international inc.). The dessicated area was wiped gently with wet sterilized gauze. Then, 30% TCA was applied to eroded area including surrounding margin. Postoperative wound care consisted of frequent applications of topical antibiotic ointment and washing out the area with lukewarm water after defecation. The lesion showed improvement 10 days later and has not recurred 1 year after treatment without scarring (Fig. 1B). The skin lesion of the 22-year-old female had been present for 2 months. There were multiple verrucous papules around anal mucocutaneous junction area and labia majora (Fig. 2A). In her past history, the lesion had developed slowly 5 months after sexual intercourse with her boyfriend. Gynecologic examination did not show any vaginal or cervical lesions grossly. She had been treated with podophyllin application two times at a private clinic, but the lesion recurred before long. Results of the following laboratory studies were normal or negative: complete blood cell count, erythrocyte sedimentation rate, urine analysis, urine culture, serologic tests for

syphilis, and human immunodeficiency virus. She was lithotomy-positioned and was offered topical anesthesia (2% lidocaine). As described earlier, 30% TCA was applied after electrodessication on the lesion area. Before and after that procedure, biopsies were performed on the lesion site. Biopsy of the treated area showed denuded epidermis with inflammatory infiltration on upper dermis, but there was no damage to the lower dermis (Fig. 3). Postoperative wound care consisted of frequently applying antibiotic ointment and washing out the area with lukewarm water after defecation. After a follow-up period of 1 year, no recurrence was observed (Fig. 2B).

## DISCUSSION

CA in young children does not seem to be rare (4). When the CA is found in young children, it is recommended to search the cause in detail. First case of this report was regarded to be caused by a sexual abuse. Her hymen was identified to have been perforated by two gynecologists, but her family rejected further evaluation. Several forms of therapy for CA are now used. Treatments include podophyllin resin, bichloroacetic and trichloroacetic acid, podophyllotoxin, laser, cryotherapy, cantharidin,

**Fig. 2.** 22-year-old patient with verrucous papules around the anus in case 2. A) Before treatment. B) 4 months after the combination therapy of electrodesiccation and applying 30% trichloroacetic acid.

**Fig. 3.** Case 2; Histopathology of the treated lesion of CA by combination therapy of electrodesiccation and applying 30% trichloroacetic acid. A) H&E 40 ×. B) H&E 100 ×.

electrosurgery, intralesional injection of 5-fluorouracil, and investigational treatment options such as interferons, cimetidine, imiquimod, cidofovir and so on (5,6). But many young children or infants cannot tolerate most procedures for CA

and some methods such as podophyllin should not be used on them. Until now, the treatment of childhood CA has not been studied well. In practice, it is very hard to get co-operation from young children or infants when we treat them with more or less ag-

gressive methods such as TCA applying, and with aggressive approach, such as scalpel excision, laser therapy or cryotherapy. The methods could not be used on them without general anesthesia. At first, the first case patient was treated with applying TCA under sedation by using oral chloral hydrate, but even that procedure irritated her. The CA was removed partially, and recurred in some weeks. Therefore, CA was treated by one procedure, which was very successful without recurrence. After the first case, I applied the method for the second case patient who was 22-year-old. She had already been treated 2 times in vain with podophyllin. But she was treated successfully with the combination therapy. From the experience of these two cases, I tried this method on other types of wart such as common wart on extremities and face. Unlike on the mucous membrane, there were residual scars after the combination therapy as expected. The possibility of residual scar is always considered when this method is applied to other skin areas.

In conclusion, the combination therapy of ED and applying TCA is a very simple, convenient and effective method. I experienced two cases of CA on anal mucocutaneous junction area that were treated successfully with the combination

therapy of ED and applying TCA by one procedure. This method could be applied to not only CA, but also intractable wart. More cases should be collected to confirm the therapeutic efficacy of the combination therapy for CA, compared with other conventional modalities.

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