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## Condyloma acuminatum in a 62-year-old patient with HIV infection



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### ABSTRACT

**Introduction:** Condyloma acuminatum is caused by infection from Human Papilloma Virus (HPV), mostly found in the perineum and genital area. Therefore HPV infection is the most common sexually transmitted infection in the world. Infection often occurs in patients with a decreased immune system, such as Human Immunodeficiency Virus (HIV) infection.

**Case:** A 62-year-old man was diagnosed with condyloma acuminatum in the penis and accompanied by stage IV HIV infection. CD4 + count is 23 cells/ $\mu$ L. Patients were given electric surgical therapy and 80% TCA. After receiving 8 treatments in 3 months, there was no significant improvement.

**Discussion:** There are several therapeutic modalities in the management of condyloma acuminatum. Some considerations in the

selection of condyloma acuminatum therapy include size, number, anatomic location of the lesion, patient comfort, side effects and the experience of the doctor in charge. The immune system plays an important role in the successful treatment of HPV infections. The risk of persistence, recurrence, and malignant transformation can increase with the decrease in the immune system by HIV infection as measured by CD4 + counts. In this case, more aggressive treatment will be needed and immunomodulators can be given to increase the success of the therapy.

**Conclusion:** Host immune status has a significant impact on the course of HPV disease and response to treatment. HIV patients have an increased risk of HPV infection, with an increase in the duration and persistence of the disease and thus require aggressive therapy.

**Keywords:** condyloma acuminatum, HIV, electrical surgery.

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### INTRODUCTION

Condyloma acuminatum (CA) is an infection caused by Human Papilloma Virus (HPV) characterised by benign epidermal and mucosal proliferation.<sup>1,2</sup> Condyloma acuminatum affects the mucosal, skin, genitalia and anal areas.<sup>3</sup> The prevalence of CA increased by 25% from 2005 until 2012.<sup>4</sup> In Indonesia, the prevalence of CA in the community ranges from 5-19%.<sup>5</sup>

HIV infection is an infection that causes a decrease in the immune system and results in a group of symptoms known as Acquired Immune Deficiency Syndrome (AIDS).<sup>6</sup> If people living with HIV are not treated, they will experience a decrease in immunity that results in susceptibility to infection by various pathogens, one of which is condyloma acuminata.<sup>7</sup> The interaction between HPV and HIV is very complex, patients infected with multiple types of HPV are susceptible to HIV infection.<sup>8</sup>

### CASE

A 62-year-old man came to the Dermato-Venereology Outpatient Clinics of Sanglah Hospital with complaints of a lump on his genitals since 10 months ago. Initially, the number of lumps

was small, but over time the number increased and the size grew. Patients often feel pain in the lump. Patients have never experienced complaints like this before. The patient also complained of a weight loss of 15 kg within 8 months, a long history of coughing was denied. The patient has one wife and one child. The first time a patient has sexual intercourse is at the age of 23 years, often multiple partners and rarely use condoms with genito-genital sexual activity. The same complaint on the wife is denied, a history of multiple sexual partners on the wife is denied. The patient's wife has undergone an HIV test, and the results are non-reactive. The patient was diagnosed with HIV 8 months ago and received Tenofovir 300 mg every 24 hours, Lamivudine 150 mg every 12 hours, and Nevirapine 200 mg every 12 hours intraorally.

From the results of physical examination, general condition: moderate, awareness: compost mentis. Blood pressure 120/80mmHg, pulse 82 times/minute, respiratory rate 20 times/minute, axillary temperature 36.7°C, and body weight 55 kg. Physical examination on the location of the shaft of the penis found multiple tumors, well-defined, brownish-yellow in colour, size 1.5 cm  $\times$  0.5 cm  $\times$  2.5 cm to 3 cm  $\times$  0.5 cm  $\times$  3 cm, with a verrucose surface, solid consistency, the clustered

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**Figure 1** Initial Presentation



**Figure 2** Three months after therapy

configuration resembles cauliflower and in some places erosion and crusting also occur (Figure 1).

From examinations using the acetowhite test on the lesion, the lesion discoloured to white. Laboratory results obtained leukocytes  $13.66 \times 10^3/\mu\text{L}$ , hemoglobin 9.37 g/dL, platelets  $612.90 \times 10^3/\mu\text{L}$ , albumin 3.8 g/dL, CD4 + counts were 23 cells/ $\mu\text{L}$ . Examination results on viral load obtained

(HIV-1-RNA)  $1 \times 10^2$  copy/mL. The patient was diagnosed with condyloma acuminatum in the penis and stage IV HIV infection. Patients were treated with 80% TCAs that were spotted on lesions and electrosurgery. Antiretroviral (ARV) therapy from the tropics department is Tenofovir 300 mg every 24 hours, Lamivudine 150 mg every 12 hours, and Nevirapine 200 mg every 12 hours intraorally. After receiving 8 treatments in 3 months, there were no significant improvements (Figure 2).

## DISCUSSION

Lesions of HPV infection can occur in the genital, oral, or anal regions. HPV infections types 6 and 11 are most commonly detected in genital warts (condyloma acuminatum), while types 16 and 18 are detected in invasive cancers in the genital and anus.<sup>9</sup> There are three forms of condyloma acuminatum, namely: Acuminatum forms, that has no keratin, and therefore is soft, shaped like a cauliflower, mainly found in areas of the mucosa that are warm, moist and hairless; Keratolytic forms, due to keratin, resemble ordinary warts, are generally found in dry areas, namely in anogenital skin. Papule-shaped lesions are usually found in areas with perfect keratinization, the trunk of the penis, the lateral part of the vulva, the perineal region, and the peri-anus.<sup>10,11</sup> In some cases, CA does not show symptoms, but some patients may experience itching, mild burning, bleeding, irritation, psychological stress, anxiety, and shame.<sup>12</sup> The diagnosis of CA is made based on visual inspection by looking at its clinical features. Under certain conditions, the physical examination can be confirmed by biopsy and histopathological examination, which is done if the diagnosis is uncertain, when the lesion fails to respond or becomes worse during therapy, or when the condyloma has an unusual appearance including the lesion that has pigmentation, excessive bleeding or having ulcers.<sup>13,14,15</sup>

In this case report, the patient complains of a lump on the penis accompanied by pain. On examination found multiple tumors, well-defined, brownish-yellow in color, size  $1.5 \text{ cm} \times 0.5 \text{ cm} \times 2.5 \text{ cm}$  to  $3 \text{ cm} \times 0.5 \text{ cm} \times 3 \text{ cm}$ , with a verrucose surface, solid consistency, clustered configuration resembling cauliflower. Examination of the acetowhite test on the lesion results in a change in colour to white. This supports the diagnosis of condyloma acuminatum in lesions on the shaft of the penis.

Various therapeutic modalities can be used in the management of CA. The choice of therapy is determined by the number, size, location, and morphology of the CA lesion. Patient comfort, availability of therapeutic modalities, medical costs,

side effects of treatment and doctor's experience are also taken into consideration in the selection of therapy. The available therapeutic modalities are divided into two categories: (1) self-applied medications, such as imiquimod, podofilotoxin gel, polyphenols E ointment, potassium hydroxide and topical cidofovir; and (2) treatment applied by health professionals, including frozen surgery, excision surgery, laser, intralesional interferon (IFN), trichloroacetic acid (TCA), and intralesional cidofovir.<sup>16</sup> Trichloroacetic acid is a corrosive substance, and quickly becomes inactive after contact with skin/lesions. TCA concentrations vary between 80-90%. This material can penetrate quickly and has a caustic effect by causing coagulation and necrosis in superficial tissue. Treatment is repeated after one week. The success rate of TCA therapy ranges from 70%-80%, and there can be a risk of recurrence of 35%. Complications that may occur are erosion and superficial ulcers.<sup>13</sup> ARVs are recommended in patients with HPV and HIV coinfection because ARVs help increase patient immunity, increase the healing of HPV infections, induce regression, and reduce recurrence rates.<sup>17,18</sup>

Patients with immunocompromised conditions have a higher risk for the occurrence of multiple HPV infections both benign and malignant HPV types. Patients who experience immunocompromised conditions due to decreased cell-mediated immunity, for example HIV, have a higher risk of this disease and a failure rate to eradicate HPV. HIV patients have a higher possibility of increasing HPV infection, which is around 31-75%, with an increase in the duration and persistence of the disease. Patients with immunocompromised conditions have a high risk of infection with HPV especially HPV-16 and are found to have larger and more numerous lesions, as well as on treatment, usually receiving poor therapeutic response. Condyloma lesions in immunocompromised patients also have a high HPV viral load. Reduced cytotoxic T-lymphocyte reactivity to HPV oncoprotein E6 and E7 affects the ability of the host to eradicate HPV.<sup>15</sup>

Also, there has been a reported correlation between CD4 cell count and the incidence of CA recurrence. In a study conducted in Korea in 2012, a low CD4 cell count was found in the recurrent CA group with CD4 cell counts 137-329 cells/ul compared with the CA group without recurrence.<sup>19</sup> The host immune system has a significant role in the course of HPV infection and the therapeutic response.<sup>15</sup> Therapy in immunocompromised patients has a success rate of around 20% -75% depending on the type of therapy given. Anogenital warts therapy in immunocompromised patients remains a significant challenge.<sup>15</sup>

The highest incidence of HPV is associated with malignancy in patients who have low T-cells, and the invasion of the HPV virus is increased in immunosuppressive conditions. It is reported that male HIV patients have a 2 to 3 times the chance of developing penile cancer compared to patients who do not have HIV.<sup>15</sup>

In this case reports, the patient is a 62-year-old male. The patient has one wife and one child. The first time a patient has sexual intercourse is at the age of 23 years, often multiple partners, and rarely using condoms. Genito-genital sexual activity of the patient. These risk factors support the occurrence of HIV infection in patients. Condyloma acuminatum lesions were treated with 80% TCA dotted into the lesions every week for 8 weeks, followed by electric surgical therapy, but no significant changes were observed. Biopsy of the lesion is planned, accompanied by more aggressive therapy and immunomodulatory administration. Patients are also reminded to regularly take ARVs, which are also expected to help the healing process of condyloma lesions.

## CONCLUSION

In HPV patients, immune status significantly affects the course of the disease, healing, and response to treatment. HIV patients can experience a risk of HPV infection, accompanied by an increase in the duration and persistence of the disease, requiring more aggressive therapy.

## CONFLICT OF INTEREST

Author declares there is no conflict of interest regarding publication of current case report.

## ETHICAL CONSIDERATION

All patient had received an inform consent and signed letter of agreement for publication of their medical data and photography in journal article prior to any data collection.

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