



# Evaluation for Outcomes of Perianal Condyloma Accuminatum Patients treated with Surgical Resection and Electrocauterization

## Kombine Cerrahi Rezeksiyon ve Elektrokoterizasyon ile Ameliyat Edilmiş Perianal Kondiloma Aküminatum Hastalarının Sonuçlarının Değerlendirilmesi

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### ABSTRACT

**Aim:** Condyloma acuminatum (CA) is a sexually transmitted disease. Genital human papillomavirus causes the disease which characterized warts in perianal region and genital organs. Epidemiological studies in western countries reported that 1% of the sexually active population affected with this disease. Topical treatments which are applied by the patient or physician, cryotherapy with liquid nitrogen, electrocautery and surgical excision are some of the treatment modalities. When the treatment modalities are investigated, the most important problem is the high recurrence rates, although the treatment results are similar. Electrocauterization is accepted as the modality with the lowest recurrence rate in the treatment of CA.

**Method:** Between August 2014-December 2017, patients with CA who were treated in general surgery department of an university hospital in İstanbul.

**Results:** Ten of the patients (50%) who underwent surgical excision and electrocauterization with CA were female. The mean age of the patients was 32.8 years (19-52 years). Mean complaint duration of the patients were 7.6 months (2-48 months). Five of the patients (25%) were referred to surgery after cryotherapy in the dermatology clinic. Twelve patients (60%) applied directly to the general surgery with complaints of cutaneous bleeding, painful stools and itching. It was found that only one patient's (5%) human immunodeficiency virus serologic test was positive and also he had been under treatment.

**Conclusion:** Combination of surgical excision and electrocauterization could be a satisfactory treatment for CA. Carefully examination of the anal canal and electrocauterization of mucosal lesions will reduce the recurrence rate as well as the clearance rates.

**Keywords:** Condyloma acuminatum, anogenital wart, electrocautery

### ÖZ

**Amaç:** Kondiloma aküminatum (KA) sıklıkla cinsel yolla bulaşan bir hastalıktır. Genital organlar ve perianal bölgede siğillerle karakterize hastalığın etkeni human papillomavirüsüdür. Batılı ülkelerde yapılan epidemiyolojik çalışmalarda cinsel aktif popülasyonun %1'ini etkilediği bildirilmiştir. Hastanın veya hekimin uyguladığı topikal tedaviler, sıvı nitrojen ile uygulanan kriyoterapi, elektrokoterizasyon ve cerrahi eksizyon, uygulanan tedavi modalitelerinden bazılarıdır. Tedavi modalitelerinin araştırıldığı çalışmalara bakıldığında sonuçları genelde başa baş olarak bulunsa da en önemli problem yüksek rekürrens oranlarıdır. KA tedavisinde elektrokoterizasyon, nüks oranı en düşük olan modalite olarak kabul görmektedir.

**Yöntem:** Ağustos 2014-Aralık 2017 tarihleri arasında İstanbul'da bulunan üniversite hastanesi genel cerrahi kliniğinde KA tanısı ile cerrahi tedavi uygulanmış hastaların sonuçları geriye dönük olarak tarandı.

**Bulgular:** KA tanısı ile cerrahi eksizyon ve elektrokoterizasyon uygulanan hastaların %50'si (n=10) kadındı. Hastaların ortalama yaşı 32,8 yıldır (19-52 yıl). Hastaların ortalama yakınma süreleri 7,6 aydır (2-48 ay). Hastaların %5'i (%25) dermatoloji kliniğinde kriyoterapi uygulanması sonrası cerrahiye başvurdu. On iki hasta (%60) doğrudan genel cerrahi polikliniğine makattan kanama, ağrılı dışkılama ve kaşıntı şikayetleri ile başvurmuştu. Hastaların bakılan insan immün yetmezliği virüsü seroloji testinin sadece 1 hastada (%5) pozitif olduğu ve bu hastanın da tedavi altında olduğu saptandı. Hastaların ortalama takip süresi 10,7 aydır (3-29 ay). Takip süresi boyunca 3 hastada (%15) nüks saptandı.

**Sonuç:** Cerrahi eksizyon ile kombine edilerek elektrokoterizasyon işlemi, KA tedavisinde yüz güldürücü olabileceği düşünülmektedir. Anal kanallı mutlaka kontrol edilmesi ve mukozal lezyonların da koterize edilmesi temizlenme oranını arttıracak gibi nüks oranını da düşürecektir.

**Anahtar Kelimeler:** Kondiloma aküminatum, anogenital siğil, elektrokoterizasyon



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## Introduction

Condyloma acuminatum (CA) is a commonly sexually transmitted disease. It is characterized by warts in the genital and perianal region and is caused by human papillomavirus (HPV). Epidemiological studies conducted in Western countries indicate that CA affects 1% of the sexually active population.<sup>1</sup> The condition is more common among individuals 20-29 years of age.<sup>2</sup> CA is a premalignant lesion with known capacity to lead to vaginal, cervical, and anal intraepithelial neoplasms.<sup>3</sup> As a sexually transmitted and premalignant lesion, CA is an important public health issue in terms of prevention and treatment. CA affects the anogenital mucosa and the surrounding skin, appearing in the form of small to large flat papules or cauliflower-like lesions. Small lesions are asymptomatic, but lesions, especially those in the anal canal and the surrounding area, can lead to complaints such as painful defecation, bleeding, and itching. Diagnosis is usually made clinically, and histopathological diagnosis is necessary for suspected malignant lesions. Although the application of diluted acetic acid has been used to detect subclinical HPV infections, this practice is not currently recommended for external warts.<sup>4</sup> The differential diagnosis includes infections, seborrheic keratosis, and cancer. There are various methods available to treatment CA, including topical treatments applied by the patient or physician, cryotherapy with liquid nitrogen, electrocauterization, and surgical excision. While electrocauterization and surgical excision are shown to have the highest treatment success, cryotherapy is another option which is also successful in up to 80% of cases.<sup>5</sup> Although studies investigating these various treatment modalities generally yield consistent results, high recurrence rates pose the greatest challenge in treatment.<sup>6</sup> Electrocauterization is regarded as the modality resulting in the lowest recurrence rates in CA.<sup>7,8,9,10</sup> The main complication of electrocauterization is surgical burns that can penetrate to the dermis and cause anal stenosis.<sup>11,12</sup> It has been reported that a single session of electrocauterization is sufficient for treatment in less than half of patients.<sup>11</sup> It is recommended that patients treated with electrocauterization be followed closely and that recurrences be detected early and retreated without delay.<sup>13</sup> The aim of the present study was to evaluate the outcomes of combined surgical excision and electrocauterization in CA patients.

## Materials and Methods

The records of patients who underwent surgical treatment for CA at the general surgery clinic of a university hospital in Istanbul between August 2014 and December 2017 were retrospectively screened. The study included patients who were diagnosed in the dermatology unit and whose

condition did not resolve despite treatment, as well as patients who presented to the general surgery outpatient clinic due to proctological complaints and were diagnosed with CA. The patients' demographic data, duration of complaints, previous treatments, histopathologic diagnosis, and duration of follow-up (based on final outpatient follow-up visit) were recorded in Microsoft Office® Excel 2016 software. All patients read and signed an informed consent form explaining the surgical procedure.

## Surgical Technique

The patients were operated under general anesthesia in the lithotomy position. All patients received 500 mg metronidazole intravenously (IV) as preoperative antibiotic prophylaxis. Broad-based, cauliflower-like lesions (Figure 1) were excised together with the underlying skin (Figure 2). Small, flat, and isolated lesions were cauterized at the level of the skin using monopolar cautery. All excised tissues were sent to the pathology laboratory for histopathological examination. An anoscope was used to visualize the entire anal canal and all visible CA and similar structures in 360 degrees were cauterized to the level of the anal canal mucosa. After achieving hemostasis, gauze dressing impregnated with 0.2% nitrofurazone ointment was applied. For postoperative analgesia, the patients were given 500 mg IV paracetamol and 0.5 mg/kg pethidine hydrochloride every 6 hours for the first 24 hours. All patients were prescribed oral tenoxicam and discharged after wound examination on postoperative day 1. Patients returned to the outpatient clinic for follow-up 3 and 10 days after discharge. All patients and their pathology results were evaluated at 1 month follow-up. The date of their last admission to the general surgery and/or dermatology outpatient clinics for CA or other problem was recorded from hospital records as the date of their last follow-up visit.



Figure 1. Perianal condyloma acuminatum



**Figure 2.** Appearance of the perineum after surgical excision

**Statistical Analysis**

Average and percentage calculations for statistical analysis were done using the Microsoft Office® Excel 2016 software.

**Results**

The medical records of 20 patients who were diagnosed with perianal CA and underwent surgical excision and electrocauterization were evaluated retrospectively. Fifty percent (n=10) of the patients were female. The mean age of the patients was 32.8 years (19-52 years). The mean duration of the patients' complaints was 7.6 months (2-48 months). Five (25%) of the patients had presented to the surgery clinic after undergoing cryotherapy in the dermatology clinic, and another 3 had been referred from the dermatology clinic because they were not eligible for cryotherapy. The other 12 patients (60%) had applied directly to the general surgery outpatient clinic due to complaints of anal bleeding, painful defecation, and itching. Human immunodeficiency virus (HIV) serology test was positive in only 1 patient (5%) who we learned was under treatment. Nine of the patients (45%) also had lesions in the anal canal. These lesions were electrocauterized to the mucosal level. None of the patients developed wound site infections. Anal stenosis was not observed during outpatient follow-up examinations in any of the patients. Pathology results indicated an intraepithelial lesion with mild dysplasia in 1 patient, while no pathology other than CA was detected in the other patients. The patient with dysplasia had clean surgical margins and follow-up was planned. The mean follow-up duration of the patients was 10.7 months (3-29 months), during which recurrence was

**Table 1. Results**

Gender	50% Female 50% Male
Age (years)	32.8 years (19-52 years) Females 30.1 years (21-52 years) Males 35.5 years (19-49 years)
Duration of complaints	7.6 months (2-48 months)
HIV positivity	5% (n=1)
CA clearance rate	100%
CA in anal canal	45% (n=9)
CA recurrence	15% (n=3)
Follow-up time (mean, months)	10.7 months (3-29 months)

CA: Condyloma acuminatum, HIV: Human immunodeficiency virus

detected in 3 patients (15%). One patient with recurrence underwent secondary electrocauterization and the other 2 patients underwent cryotherapy as a secondary intervention. The patients' findings are summarized in Table 1.

**Discussion**

CA, is believed to affect 1% of the sexually active population worldwide, and is reported to be most common among women 20-24 years of age and men 25-29 years of age. The mean ages of the female and male patients in our study were 30.1 years and 35.5 years, respectively. This age difference of about a decade compared to Western countries is noteworthy. Liquid nitrogen cryotherapy of lesions is among the available treatment options for CA and its reported rates of clearance are in the 71-79% range.<sup>9</sup> As 25% of the patients in our study were admitted to the general surgery clinic despite cryotherapy treatment, this group can be considered representative of the patients for whom cryotherapy is ineffective. Excluding those who were referred from the dermatology clinic, the remaining 60% of the patients were found to have presented directly to the general surgery clinic with complaints such as itching, bleeding, and painful defecation. This can be interpreted as showing that less than half of patients were aware of CA. Electrocauterization for the treatment of CA is known to be 90-96% successful in lesion clearance.<sup>5</sup> However, surgical excision is reported to be the most cost-effective treatment method for large and cauliflower-like or pedunculated lesions.<sup>14</sup> In our study, both methods were applied in combination and the lesion clearance was achieved in all patients. Although no macroscopic lesions remained after the first session, recurrence was observed in 3 patients (15%), one of whom underwent a second

electrocauterization session while the others underwent cryotherapy. The recurrence rate of electrocauterization for CA in the literature is 18%.<sup>15</sup> Cryotherapy was preferred due to the patients' unwillingness to endure the stress the operating room. The relative success of electrocauterization compared to cryotherapy is believed to be due to the fact that visualizing the anal canal under anesthesia enables the cauterization of internal lesions. Nine of the 20 patients in our study had lesions in the anal canal. HPV co-infection occurs in up to 60% of HIV-infected patients, and a higher incidence of anal canal squamous cell carcinoma has been reported in these patients.<sup>11</sup> Despite this reportedly high rate of coexistence, HIV infection was detected in only 1 patient (5%) in our study. Although the prevalence of HIV infection is increasing in Turkey according to the 2011 progress report from the World Health Organization, its incidence is still low here compared to other countries.<sup>16</sup> We believe the low rate of CA and HIV coexistence in our study compared to the literature is due to the low prevalence of HIV infection. Gearhart et al.<sup>17</sup> reported that an estimated 88% of anal cancers are associated with HPV worldwide, and that this risk increases further with HIV infection. In our study, mild dysplasia was detected in only 1 patient. This patient had negative excision margins and is currently under follow-up for 29 months. CA, which is a common, sexually transmitted, potentially premalignant condition, should be regarded as a public health concern for these reasons. We found that nearly half of the patients in this study had presented to the outpatient clinics for proctological complaints. HPV subtyping and vaccination based on the result is one of the treatments currently being considered. A study in Australia found a 59% reduction in external warts within 1 year of initiating vaccinations.<sup>18</sup> In light of this information, we believe that with proper national prevention and vaccination programs, CA is a preventable and more easily treatable disease. Our results suggest that electrocauterization combined with surgical excision can yield satisfactory results in the treatment of CA. Examining the anal canal and also cauterizing mucosal lesions not only increases clearance rate, but also reduces recurrence rate. In addition, we believe histopathological examination of excised specimens will promote the early diagnosis of premalignant and malignant lesions.

## Ethics

**Ethics Committee Approval:** Retrospective study.

**Informed Consent:** Consent form was filled out by the patient.

**Peer-review:** External and internal peer-reviewed.

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