

Dr D. Brugger
FMH Gynaecology
CH-3177 Laupen

CRYOTHERAPY OF VULVAR CONDYLOMATA ACUMINATA WITH AN AEROSOL

Venereal warts (pointed condylomata, also called moist or mucous papules) are a clinical manifestation of the human Papillomavirus (HPV). Of this very small virus particle with its icosahedral structure, some 70 subtypes can now be distinguished by molecular-biological analysis. Each HPV type has its preferred, specific host tissue. In the anogenital area 14 types occur most frequently. These are subdivided into two categories, one (HPV-type 6/11/42/43/44), with low, and one (HPV type 16/18/31/33/35/45/51/52/56) with moderate to high oncological potentials.

Virus analysis of the condylomata acuminata mostly reveals benign HPV types 6 or 11 (1,6); in children, the cutaneous HPV type 2 is also found in up to 20% of the cases (6). The prevalence of anogenital HPV infections fluctuates between 5 and 20% (3,4), depending on the population screened and laboratory method used. Clinically, it is possible by means of vulvoscopy (inspection of the vulva with the colposcope after application of 3% acetic acid) to diagnose not only even the smallest condylomata acuminata, but also subclinical, virus-related skin irritations (Fig. 1).

The problem

Hitherto, the treatment of condylomata acuminata was difficult in that it involved either frequent topical applications with inadequate success, or invasive surgical interventions. The latter must be performed either under local anaesthesia or under general anaesthesia in



Fig. 1: Characteristic virus-related skin lesion at vulvoscopy: blanching after application of acetic acid (5), white haloes round hair follicles and slight formation of rhagades.

hospital. Table 1 shows the currently known therapeutic methods: Laser surgery is gaining ground, but the very expensive equipment is a drawback, especially considering the high incidence of recurrence of condylomata acuminata, 20-30% (7,8).

A practical solution

The first reports in the dermatological literature (2) on cryotherapy of skin warts with the Histofreezer® (supplied in Switzerland by Uhlmann-Eyraud Pharma, CH-1217 Meyron 2, Geneva) were so encouraging that I decided to test this treatment with pointed condylomata of the vulva. The aerosol can, introduced in 1988, is so easy to handle that it provides new therapeutic possibilities, applicable at any time. This spray can contains a mixture of dimethyl ether and propane gas and with use of plastic applicators resembling cottonwool sticks it supplies cryotherapy at a temperature of -57°C. The can contains sufficient cryogen for 40 cryotherapeutic applications. Literature reports

Table 1:

Methods of treatment of condylomata acuminata	
Local (topical) therapy	Brand name in Switzerland
<ul style="list-style-type: none"> • Podophyllin (25% solution in 5% alcohol) • Podophyllotoxin • 5-Fluorouracil (1% solution or 5% ointment) • Bleomycin • Thiotepa • Colchicine-containing ointments/powders • Trichloroacetic acid (50-85% aqueous solution) • Salicylic acid • Formaldehyde (tanning agents) • Corrosive acids: nitric acid, acetic acid oxalic acid, lactic acid • Povidone iodine • alpha-Interferon: intralesional injections 3xl mil IU per week for 3 weeks • beta-Interferon: topically as a gel (or systemic 2 mil IU i.v., 5 days per 2 weeks; s.c. or i.m. application also possible: 3xl mil IU per week for 4 weeks) • Cryotherapy 	<p>Condylin[®], Warix[®]</p> <p>Efudix[®], a component of Verrumal[®]</p> <p>e.g. in Verra-med[®], Verrumal[®], Warz-ab Extor[®]</p> <p>Tannosynt[®]</p> <p>Solcoderm[®]</p> <p>Betadine[®], BraunoI[®], Jodoplex[®] etc.</p> <p>Intron A[®] (-2b)</p> <p>Roferon-A[®] (-2a)</p> <p>not available (Fiblaferon[®] in Germany)</p> <p>Histofreezer[®] (-57°C)</p>
Surgical treatment	instrumentarium
<ul style="list-style-type: none"> • Electrosurgical procedure • Surgical excision/resection • Laser vaporization • Cryosurgery 	<p>cautery/electric loop</p> <p>scalpel or sharp spoon</p> <p>CO₂ laser</p> <p>liquid nitrogen (-196°C)</p>

about the efficacy of the Histofreezer® in skin warts are sparse (2) and there are none at all regarding condylomata acuminata. Methods of treatment of condylomata acuminata

Practical implementation and results

I diagnosed venereal warts in six patients (five women and one man) aged 19 to 32 years in my rural gynaecological practice over a period of 14 months. I started the Histofreezer® treatment during the same consultation.

Only one woman with massive perianal condylomata acuminata required local anaesthesia for the therapeutic session. All other cryotherapy was applied without analgesia.

After filling the plastic applicator from the spray can, followed by a waiting period of 10 seconds, I froze the condylomata for 45 to 50 seconds under light pressure. I performed a maximum of six such applications per session and per patient. On completion of the Histofreezer® treatment, the condylomata acuminata had healed without scar formation in all six patients. A black woman from Nigeria with massive condylomata acuminata showed slight depigmentations 25 days after the cryotherapy (Figs 2 and 3).

In other two women, vulvoscopy after healing of the venereal warts still showed mild virus-related alterations, viz. blanching of the skin after application of 3% acetic acid and slight formation of rhagades. Healing necessitated one to four cryotherapeutic consultations at two-week intervals; on average the patients required two sessions.



Fig. 2: Massive condylomata acuminata (before treatment).



Fig. 3: Healing without scar formation, with mild depigmentation (25 days after treatment; same patient as in Fig. 2).

Adverse effects during the cryotherapy were minimal. Two to three days after the treatment some of the patients complained of mild pain while sitting and of slight exudations, requiring local adjuvant treatment with disinfectant soap.

Discussion

The group of cases reported here was too small to be regarded as a serious trial of the Histofreezer®. However, we practised systematic follow-up and recorded the results 15 to 30 days after the cryotherapy both subjectively and objectively by means of vulvoscopy and photographic documentation. It was surprising to find that even large condylomata acuminata had healed completely, in contrast with skin warts which responded adequately only if they were under 5 mm in diameter (2)! This is probably attributable to the exophytic growth of the pointed condylomata, which renders them particularly sensitive to cryotherapy. Still, in three additional patients, localized virus-related skin lesions (Fig. 1) responded well to the Histofreezer®. The subjectively unpleasant burning sensation in every case resolved after a single application.

The first results of the treatment of anogenital warts with aerosol cryotherapy in the literature are encouraging. I should therefore like to advise my practising colleagues to start collecting their own experience with this therapeutic method which entails few risks, adverse effects or complications and is relatively inexpensive. Controlled clinical trials would be desirable, but in university clinics they would have to compete with laser surgery, since vulvar condylomata acuminata constitute an ideal material for training in the handling of laser equipment.

Abstract

A report is presented of the successful cryotherapy of six patients with condylomata acuminata using the Histofreezer®. Application of cold (-57°C) with the spray can is simple, always available, cheap and low in complications. Further reports from practice, and comparative effectiveness studies with laser therapy (increasing cost-benefit analysis) are invited.

Literature

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