

İKİ ÇOCUKTA CİNSEL YOL DIŞINDA BULAŞMIŞ KONDİLOMA AKUMİNATA'NIN ADLİ TİBBİ ÖNEMİ

→ Yeşim Tuyji → Mahmut Aşirdizer → Mehmet Sunay Yavuz → Yıldırım Zeyfeoğlu
→ Tarık Uluçay → Mehmet Gökhan Dizdar

Department Of Forensic Medicine, Medical Faculty of Celal Bayar University, 45030, Manisa, Turkey

GİRİŞ

Kondiloma aküminatanın etkeni insan papillomavirüsü (HPV) dür. Kondiloma aküminata erişkinlerde yaygın olarak cinsel yolla bulaşan hastalıklardan biridir. Çocuklarda görülmesi nadir olup, cinsel istismara eşlik edebilmektedir.

Olgular:

Bu makalede, cinsel istismarı kurbanı olarak adli muayene için gönderilmiş, kondiloma aküminatalı iki çocuk olgu sunulmuştur.

Biz bu olguların her ikisinde cinsel istismarın adli-tıbbi kanıtlarının bulunmadığı sonucuna ulaştık. Olgularda cinsel yol dışındaki olası bulaşma yolları araştırıldı.

Tartışma:

Türk Ceza Kanunu'nun 280. maddesine göre, klinisyenler kondiloma aküminatalı tüm çocukları, şüpheli cinsel istismar olguları olarak yasal mercilere bildirmekle yükümlüdür. Bu genellikle bir sosyal probleme yol açmakta; çocukların baba-

ları veya erkek kardeşleri yasal merciler ve aile bireyleri önünde şüpheli olarak istenmeyen davranışlara maruz kalmaktadırlar. Sonuç olarak, benzer olgularla karşılaşan doktorların, öncelikle olguları adli tıp bölümlerine danıştıktan sonra adli tıp uzmanının olayın çocuğun cinsel istismarı kararını takiben adli makamlara bildirmesi gerektiğini düşünmekteyiz.

Anahtar Kelimeler: İnsan papillomavirüsü, Kondiloma aküminata, Cinsel yol dışı bulaş,

Bu genellikle bir sosyal probleme yol açmakta; çocukların babaları veya erkek kardeşleri yasal merciler ve aile bireyleri önünde şüpheli olarak istenmeyen davranışlara maruz kalmaktadırlar. Sonuç olarak, benzer olgularla karşılaşan doktorların, öncelikle olguları adli tıp bölümlerine danıştıktan sonra adli tıp uzmanının olayın çocuğun cinsel istismarı kararını takiben adli makamlara bildirmesi gerektiğini düşünmekteyiz.

MEDICO-LEGAL IMPORTANCE of NONSEXUALLY TRANSMITTED CONDYLOMA ACUMINATUM IN TWO CHILDREN

ABSTRACT

Introduction:

Human papillomavirus (HPV) is major agent of condyloma acuminatum. Condyloma acuminatum is one of the most common sexually transmitted diseases in adults, but its presence in children is rare and could be associated with sexual abuse.

Cases:

In this article, two child cases with

condyloma acuminatum who were sent for forensic examination as victims of child sexual abuse were presented. We concluded that there was not medico-legal evidence of sexual abuse in both cases. Probable transmission routes were investigated and discussed in both cases.

Discussion:

According to article 280 of Turkish Penal Code, clinicians have declared all children with condyloma acuminatum to authorities to be suspected sexual abuse case; this usually causes

a social problem and children's fathers or brothers generally have been exposed to dealings to be a suspicious in front of judicial authorities and family members. In conclusion, we think that physicians who came across with same cases, firstly must consulted with forensic medicine departments, later they must declared to authorities if forensic scientists decided to a child sexual abuse.

Keywords: human papillomavirus, condyloma acuminatum, nonsexual transmission, maternal transmission, medico-legal importance.

This usually causes a social problem and children's fathers or brothers generally have been exposed to dealings to be a suspicious in front of judicial authorities and family members. In conclusion, we think that physicians who came across with same cases, firstly must consulted with forensic medicine departments, later they must declared to authorities if forensic scientists decided to a child sexual abuse.

INTRODUCTION

Condyloma acuminatum results from an infection with human papillomavirus (HPV), but, unlike some other sexually transmitted diseases, its epidemiology is largely unknown [1].

HPV is a member of the papillomavirus genus in the papillomavirus family of viruses [2]. To date, more than 200 HPV types have been identified, of which approximately 30-40 types have been found in female genital tract infections [3-5]. HPVs are nonenveloped DNA viruses 55 nm in diameter with an icosahedral capsid enclosing a double-stranded, circular DNA genome of 7,900 base pairs [6,7]. When HPV infection is detected in the epithelium, it may span a spectrum ranging from normal to condyloma planum (flat warts) or acuminatum (acuminate warts), to intraepithelial neoplasia and invasive cancer [8]. Some high-risky types of HPVs are more frequently found in premalignant or malignant lesions and are associated with cancers of the cervix, vulva, vagina and anus in women or anus and penis in men [9].

The worldwide prevalence of high-risky types of HPV in cervical carcinomas has been estimated at 99.7% [10]. The vast majority of HPV infections are transient, with approximately 70% of infections cleared within 1 year and 90% within 2 years, but, there is high risk of developing cancer when

infection persists in 5% to 10% of infected women [11,12].

Condyloma acuminatum is one of the most common sexually transmitted diseases in adults, but its presence in children is rare and could be associated with sexual abuse. Even though association can vary from 0 to 80% according to studies, appropriate investigation in all cases to rule out sexual abuse is still controversial, as similar lesions in the mother or siblings are frequently observed in sexual and non-sexual transmission [13,14].

In this article, two child cases with condyloma acuminatum due to non-sexual transmission were submitted and it was aimed to call attention to importance of non-sexual transmission of condyloma acuminatum in children who were sent for forensic examination as victims of child sexual abuse.

CASES

Case 1:

A 9-years-old female child was applied to pediatrics polyclinic of child hospital with complains of hyperemia and verrucose swellings around anus, and pain in anus during defecation which begun 40-45 days ago. During physical examination, condyloma acuminatum and hyperemia was seen in the anal region and the patient who was diagnosed as "HPV infection" by

5% acetic acid (vinegar) test and *HPV PCR* test was transferred to gynecology and obstetrics clinic of the university hospital.

On physical examination of the case in the gynecology and obstetrics clinic of the university hospital, the patient described that hyperemia and verrucose swellings and itchiness around her anus was begun 40-45 days ago. She was stricken from pain during defecation and she has often scratched to anal region with herself fingernail. Gynecologists defined condyloma acuminatum and two scratches at the anal mucosa. They reported that there were not the findings of vaginal intercourse. In the meantime, patient was reported to be medico-legal case to office of the public prosecutor with suspicious as child sexual abuse before beginning the treatment.

The case was referred to our department for medico-legal evaluation as a subject of prosecution after one day. The court inquired about whether presence or absence of the child sexual abuse, whether contaminated or no contaminated for illness in the child from public toilets, baths, towels or underwear.

On the interview by child in our department, she did not define any sexual abuse and her behaviors were not pessimistic, timid, frightened or excited. She only defined that her anal region extremely itched and she have

often scratched to anal region with herself fingernail. On the physical examination, there were not physical or sexual abuse findings on the body. Only four condyloma acuminatum lesions was seen around anal canal and two scratches at the anal mucosa settled at 3 and 6 o'clock levels according to hour plate in gynecological position, but there was not any lesion into anal canal, rectum and vagina.

In the statement of child's mother, she said that her daughter lived together with his father and mother in their home. Her daughter often has to use to public toilets because she had renal disease. She stated that there was not any doubt from sexual abuse and she supposed from contamination by non-hygienic toilets or other ways.

In the *HPV PCR* test that applied for our demand, HPV was found to be negative in all samples obtained from child's mother and father.

We concluded that two scratches at the anal mucosa had had features could be by fingernail, but there was not medico-legal evidence in this case for relationship between condyloma acuminatum due to HPV infection and sexual abuse because she had no physical and physiological findings of sexual abuse.

This illness had been must contaminated from non-hygienic public toilets like reported in

her mother's statement or other ways.

Case 2:

A 13-months-old male child was applied to dermatology polyclinic of Celal Bayar University Hospital with complains of verrucose swellings around anus which begun 2 months ago. During physical examination of the patient, anogenital warts in the anal region were diagnosed to be condyloma acuminatum due to HPV by 5% acetic acid test and *HPV PCR* test. Medical treatment was begun with podophyllin resin 25% from dermatology clinic.

The patient was consulted to pediatric surgery clinic of University Hospital. On the pediatric surgery consultation, the patient's anal tonus was defined to be normal; extensive condyloma acuminatum lesions were seen in the anal region and was suggested the cauterization treatment by general anesthesia for these lesions. In the meantime, patient was reported to be medico-legal case to office of the public prosecutor with suspicious as child sexual abuse before beginning the treatment.

The case was referred to our department for medico-legal evaluation as a subject of prosecution after 5 months from first medical examination. The court inquired about whether presence or absence of the child sexual abuse, whether contaminated or no

contaminated for illness in the child from public toilets, baths, towels, underwear or vaginal labor.

On the physical examination in our department, only one condyloma acuminatum lesion in healing phase was seen in gluteal region in 4cm distance from anal canal, which settled at 7 o'clock level according to hour plate in gynecological position. Also there was hyperemia around the anus, which was considered as eczema.

In the statement of child's mother, she said that her son lived together with his father, mother and his 12-years-old sister in their home. She had given birth 18 months ago and applied to a gynecology clinic for intra uterine device 13 months ago. Then some itchy lesions were seen in anogenital region of her 9 months ago, firstly. She was medically treated with diagnosis to be condyloma acuminatum. After two months from appearance of lesions in mother, condyloma acuminatum lesions were seen in anal region of her son, too. Finally, these lesions occurred in anogenital regions of her husband 5 months ago. There was not any lesion in her big daughter.

We concluded that the main porter in the family of condyloma acuminatum due to HPV infection was mother. She had been must contaminated during recovery, gynecological examination or by other ways.

The child and his father should have been transmitted from the mother when the timing of appearance of the lesions was considered. There was not medico-legal evidence of sexual abuse in this case. The transient of condyloma acuminatum to child had been must occurred during vaginal delivery or by other ways.

DISCUSSION

The incubation period of condyloma acuminatum was estimated to be between three weeks and eight months for mucosal warts, and between two weeks and more than a year for skin warts [13]. Whilst the routes of HPV contamination in children were reported to be sexual abuse, maternal transmission and non-sexual transmission by Syrjönen and Parunen [13]; all contamination routes except sexual abuse were defined to be non-sexual transmission by some authors [14-17]. Childhood sexual abuse was thought to be the most common mode of viral transmission [14, 18]. Sexual route of transmission is responsible for the occurrence of condyloma acuminatum lesions in 99% of the cases [19]. According to opinion of Syrjönen and Parunen; maternal transmission have occurred to be (1) directly, during vaginal delivery from the mother, at Caesarean section/early rupture of membranes, from mother when taking care of the baby, or via saliva or breast milk;

(2) indirectly, during vaginal delivery via contaminated objects or surfaces, or when born by Caesarean section via contaminated objects or surfaces; and (3) intra-uterine transmissions, through semen, ascending infection from mother's genital tract, or transplacentally; non-sexual transmission have occurred to be (1) directly, transmission from one person to another or auto-inoculation; (2) indirectly, via contaminated objects or surfaces [13]. Perinatal transmission of the virus from mother to baby can happen and autoinoculation of finger warts to anogenital area is sometimes possible [17, 19]. In indirect non-sexual transmission, the contamination by towels, handshakes, door-handles, toilet seats, underwear, swimming pools, and saunas can be possible [19].

Giyres et al reported 11-month-old girl with genital lesions and her father's with penile area lesions of condyloma acuminatum. Although they suspected a possible sexual abuse as the cause of this infection, this suspicion was not supported in detailed and meticulous investigation of the case and they concluded that transmission was probably nonsexual, as there was no evidence for sexual abuse [20].

Even though non-sexual transmission of HPV in clinical medicine is well defined [21-27], the number of articles about

non-sexual transmission of HPV in forensic medicine is rare. In a review written by Robinson and Watkeys, the process of medico-legal investigation of children with genital warts was reported in the four steps [28]: (1) Full general examination: this step includes an examination about the physical and developmental progress of the child, the investigation the physical and psychological findings of all forms of abuse and the warts on whole body; (2) Evaluation of child for sexual abuse: in this step, the appropriateness of the general behaviour of the child and the physical findings in particularly in the genital and anal areas should be assessed for evidence of sexual abuse and should be recorded. (3) Screening for other sexually transmitted disease; in this step, Chlamydia trachomatis, and Neisseria gonorrhoeae should be screen by microbiological techniques. (4) Examination of family members: in this step, the evidence that transmission may occur through close contact and through vertical transmission should be investigated. It is, therefore, recommended that any siblings should be examined to identify anogenital or non-anogenital warts. Parents should also be examined, particularly the mother of the child, if the child is less than 3 years of age. Documentation of the mother's smear history should be included. The smear history would indicate whether there was any evidence of infection with HPV. If intraepithelial

neoplasia was documented, HPV may be implicated [28].

In the present cases, we concluded that there was not medico-legal evidence of sexual abuse. Transmission routes were probably due to indirect nonsexual contamination by non-hygienic public toilets or other ways for first case and maternal transmission during vaginal delivery or other ways for second case.

Although a thorough medical and social evaluation is essential when condyloma acuminatum were seen in children because it is maybe a child sexual abuse, the physician should bear in mind the possibility of nonsexual transmission and should not forget that the effective management of condyloma acuminatum in children needs a multidisciplinary approach and cooperation [17, 19].

In Turkey, a physician legally is responsible from declaration without wasting time when he/she came across a crime or crime suspicion. A physician who fails to inform or delays informing the proper authorities about a situation where, in the course of their duty, they have an indication that a crime was committed, will be given up to one year's imprisonment according to article 280 of Turkish Penal Code [29].

Bulbul et al reported that, sexual abuse is a multidimensional problem with psychosocial,

medical, and legal aspects. Therefore, existence of an anogenital wart in a child requires a team approach involving the parent, pediatrician, pediatric dermatologist, pediatric gynecologist, pediatric psychiatrist, and social worker. Each case should be reported to judicial authorities as soon as suspected, as unproven and unreported cases of abuse could cause serious physiological and psychological trauma in the child [30].

Under this situation, whilst clinicians have declared all children with condyloma acuminatum to authorities to be suspected sexual abuse case; this usually causes a social problem and children's fathers or brothers generally have been exposed to dealings to be a suspicious in front of judicial authorities and family members [17].

In conclusion, we think that physicians, who came across with similar cases, firstly should consult to the forensic medicine departments, later they must declared to authorities if forensic scientists decided to a child sexual abuse.

REFERENCES

1. Daling JR, Sherman KJ, Weiss NS. Risk factors for condyloma acuminatum in women. *Sex Transm Dis* 1986; 13(1): 16-8.
2. Tuncer ZS. Human papillomavirus infection in terms of gynecological. *Hacettepe Medical Journal* 2007; 38(1): 8-14.
3. Song ES, Lee HJ, Hwang TS. Clinical efficacy of human papillomavirus DNA detection in urine from patients with various cervical lesions. *J Korean Med Sci* 2007; 22(1): 99-104.
4. Bernard HU. The clinical importance of the nomenclature, evolution and taxonomy of human papillomaviruses. *J Clin Virol* 2005; 32 Suppl 1: S1-6.
5. Muñoz N, Bosch FX, Castellsagué X, Díaz M, de Sanjose S, Hammouda D, Shah KV, Meijer CJ. Against which human papillomavirus types shall we vaccinate and screen? The international perspective. *Int J Cancer* 2004; 111(2): 278-85.
6. Ozarmagan G, Topkarcı Z. Human papillomavirus vaccines. *ANKEM Dergisi* 2006; 20 Suppl 2): 56-61.
7. Chin-Hong PV, Klausner JD. Diagnostic tests for HPV infection. *MLO Med Lab Obs* 2004; 36(10): 10-6.
8. Palefsky JM, Holly EA. Molecular virology and epidemiology of human papillomavirus and cervical cancer. *Cancer Epidemiol Biomarkers Prevent* 1995; 4(4): 415-28.
9. Auvert B, Sobngwi-Tambekou J, Cutler E, Nieuwoudt M, Lissouba P, Puren A, Taljaard D. Effect of male circumcision on the prevalence of high-risk human papillomavirus in young men: results of a randomized controlled trial conducted in Orange Farm, South Africa. *J Infect Dis* 2009; 199(1): 14-9.
10. Walboomers JM, Jacobs MV, Manos MM, Bosch FX, Kummer JA, Shah KV, Snijders PJ, Peto J, Meijer CJ, Muñoz N. Human papillomavirus is a necessary cause of invasive cervical cancer worldwide. *J Pathol* 1999; 189(1): 12-9.
11. Hernández-Hernández DM, Ornelas-Bernal L, Guido-Jiménez M, Apresa-García T, Alvarado-Cabrero I, Salcedo-Vargas M, Mohar-Betancourt A, García-Carranca A. Association between high-risk human papillomavirus DNA load and precursor lesions of cervical cancer in Mexican women. *Gynecol Oncol* 2003; 90(2): 310-7.
12. Dunne EF, Unger ER, Sternberg M, McQuillan G, Swan DC, Patel SS, Markowitz LE. Prevalence of HPV infection among females in the United States. *JAMA* 2007; 297(8): 813-9.
13. Syrjänen S, Puranen M. Human papillomavirus infections in children: the potential role of maternal transmission. *Crit Rev Oral Biol Med* 2000; 11(2): 259-74.
14. Teran CG, Villarroel P, Teran-Escalera CN. Severe genital human papillomavirus infection in a sexually abused child. *Int J Infect Dis* 2009; 13(3): e137-8.
15. De Jong AR, Weiss JC, Brent RL. Condyloma acuminata in children. *Am J Dis Child* 1982; 136(8): 704-6.
16. Obalek S, Jablonska S, Favre M, Walczak L, Orth G. Condylomata acuminata in children: frequent association with human papillomaviruses responsible for cutaneous warts. *J Am Acad Dermatol* 1990; 23(2 Pt 1): 205-13.
17. Yazganoglu KD, Mirzoyeva L, Ozarmagan G. Childhood condyloma acuminata. *Turkish Journal of Dermatology* 2009; 3: 77-82.
18. Jayasinghe Y, Garland SM. Genital warts in children: what do they mean? *Arch Dis Child* 2006; 91(8): 696-700.
19. Ho TY. Condyloma acuminata management guidelines. *Hong Kong Dermatology & Venereology Bulletin* 2001; 9(1): 36-7.
20. Giryas H, Grunwald MH, Hammer R, Halevy S. Evaluation of sexual abuse in an infant with condyloma acuminatum. *Harefuah* 1995; 129(12): 548-50.
21. Tröbs R, Metzner G, Friedrich T, Pustowoit B, Handrick W, Nestler I. Papillomavirus-induced genital warts in a girl-
22. Stevens-Simon C, Nelligan D, Breese P, Jenny C, Douglas JM Jr. The prevalence of genital human papillomavirus infections in abused and nonabused preadolescent girls. *Pediatrics* 2000; 106(4): 645-9.
23. Mamas IN, Sourvinos G, Spandidos DA. Human papilloma virus (HPV) infection in children and adolescents. *Eur J Pediatr* 2009; 168(3): 267-73.
24. Sinal SH, Woods CR. Human papillomavirus infections of the genital and respiratory tracts in young children. *Semin Pediatr Infect Dis* 2005; 16(4): 306-16.
25. Fabbrocini G, Cacciapuoti S, Monfregola G. Human papillomavirus infection in child. *The Open Dermatology Journal*, 2009; 3: 111-6.
26. Fairley CK, Gay NJ, Forbes A, Abramson M, Garland SM. Hand-genital transmission of genital warts? An analysis of prevalence data. *Epidemiol Infect* 1995; 115(1): 169-76.
27. Rombaldi RL, Serafini EP, Mandelli J, Zimmermann E, Losquiavo KP. Perinatal transmission of human papillomavirus DNA. *Virol J* 2009; 6: 83.
28. Robinson AJ, Watkeys JE. Genital warts in children: problems of management. *Clin Forensic Med* 1999; 6(3): 151-5.
29. Büken E, Sahinoğlu S, Büken NO. Statutory disclosure in article 280 of the Turkish Penal Code. *Nurs Ethics* 2006; 13(6): 573-80.
30. Bülbül S, Demirceken F, Cakir B, Pinar Cakir E, Unlü E, Soyer T. Difficulties in diagnosing sexual abuse in children with condyloma acuminata in Turkey. *J Child Sex Abus* 2010; 19(1): 35-42.

Correspondence to:

Mahmut Aşirdizer Celal Bayar Üniversitesi Tıp Fakültesi Adli Tıp Anabilim Dalı Manisa / TÜRKİYE
masirdizer@yahoo.com