Undiagnosed Maternal HPV Infection Causing Postnatal Recurrent Laryngeal Papillomatosis

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Although anogenital warts are the most common clinical manifestation of HPV infection, majority of infected individuals have subclinical disease which is important for transmission of infection. When such a transmission is seen in perinatal period, laryngeal papillomatosis may be seen during childhood. Affected infant may suffer from complications despite a quite bothersome treatment course. Therefore, transmission should be prevented if possible. Cesarean delivery may protect against transmission, but it is not routinely recommended in the presence of maternal genital warts. Gynecologic evaluation of all pregnant women to document genital infections is much more important. In cases with genital warts, follow-up should be performed more closely in order to make a decision of whether medical or surgical treatment of warts or cesarean delivery is needed. Also, the infant should be examined periodically after the delivery for the early detection of laryngeal papillomatosis.

Here, a woman with undiagnosed genital HPV infection who transmitted infection to her infant is reported. Infection of infant caused recurrent laryngeal papillomatosis which necessitated repeated surgical procedures.

Key Words: Human papilloma virus, Genital wart, Perinatal transmission, Laryngeal papillomatosis

Gynecol Obstet Reprod Med;14:1 (130 - 131)

Introduction

Genital human papilloma virus (HPV) infections are so frequent in general population. Although anogenital warts are the most common clinical disease, majority of infected individuals have only subclinical disease. In patients with subclinical infection, diagnosis may only be achieved via colposcopic evaluation and cytological or histological examination given the lack of symptoms and/or visible lesions.[1] Transmission of infection is highly probable in presence of subclinical disease.

Here, a case with subclinical genital HPV infection who transmitted infection to her infant causing recurrent laryngeal papillomatosis is reported. Also, the management of pregnant women with genital warts during pregnancy and at the time of delivery is discussed.

Case Report

A 23-year-old woman delivered her second infant via vaginal route. Although her antenatal visits were irregular, she reported an uneventful antenatal course. However, she did not have vaginal examination or cervical smear testing during pregnancy. Her past medical history was unremarkable and her first delivery was at 19 years of age resulting in a healthy infant. Second infant suffered from dyspnea, hoarseness at crying, and wheezing which commenced at 3 months of age and increased gradually thereafter. At 5th months when the infant began to suffer from severe symptoms, the family admitted to the hospital. An otorhinolaryngologic examination was performed and papillary lesions were detected on both vocal cords of the infant. The biopsy of these papillary lesions revealed HPV lesions consistent with laryngeal papillomatosis. A total of 12 laser excisions and vaporizations were performed at 3-week intervals. After 4th excision, complaints of infant decreased and the therapy is still going on.

After the diagnosis of laryngeal papillomatosis, the mother underwent a gynecologic examination at our institution. However, she did not have any visible genital HPV lesions at pelvic examination and colposcopic evaluation, also her Pap smear was normal and cervical HPV-DNA was negative. Nevertheless, her husband was learned to have penile HPV lesions. The woman was considered to have undiagnosed genital HPV infection which was transmitted to her infant at or before vaginal delivery and was cleared spontaneously thereafter by her immune response. The woman was recommended routine yearly gynecologic examination and her husband was referred to a urologic evaluation. Also, the couple was informed about the role of barrier contraceptive methods in the preven-

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Submitted for Publication: *19. 06. 2008*
Accepted for Publication: *26. 06. 2008*

tion of HPV transmission.

Discussion

Maternal genital HPV infection may be transmitted to fetus or neonate through either ascending infection in pregnancy or through peripartum exposure.[2] Despite the fact that fetal or neonatal exposure to oncogenic HPV types has not been proven to have any clinical significance, exposure to maternal genital warts or vertical transmission of HPV 6 and 11 may cause significant problems. Clinically, the consequence of such an exposure is laryngeal papillomatosis during childhood which is associated with the presence of maternal anogenital warts at the time of delivery.[3]

Laryngeal papillomatosis may sometimes have a highly disabling course.[4] The course of the disease in the present case was so aggressive that too many surgical approaches under general anesthesia were required to get clinical improvement. In addition to surgery, approximately 10% of patients need adjuvant medical therapies.[5] The most serious problems include recurrent lesions, multifocal occurrence and functional impairment of the vocal folds. Also, involvement of lungs is possible due to the auto-inoculation of the virus.[6] Therefore, the importance of preventive measures regarding fetal or neonatal HPV exposure in obvious. Delivery of the infant via cesarean section may protect against laryngeal papillomatosis. However, cesarean section is rarely indicated purely for decreasing the risk of laryngeal papillomatosis even if visible genital lesions are present. Vaginal delivery should be avoided only when extensive lesions are present in lower genital tract .[1] Furthermore, in women with genital warts, the risk of development of laryngeal papillomatosis after a vaginal delivery is only 1 in 400 which is too low to recommend routine cesarean delivery for these women.[7]

In pregnant women with anogenital warts, the treatment options most commonly consist of the ablation of lesions using cryotherapy. Podophyllin and podophyllotoxin are contraindicated and the safety of imiquimod is not established during pregnancy. Sometimes, surgical treatment is needed due to the more aggressive proliferation of the lesions.[1]

As a conclusion, all pregnant women should undergo gynecologic evaluation with cervical smear testing at least during the first antenatal visit to document possible genital infections. In cases with genital warts, follow-up should be performed more closely in order to make a decision of whether medical or surgical treatment is needed. After the delivery, the infant should be examined periodically for the early detection of possible laryngeal papillomatosis.

Postnatal Reküren Laringeal Papillomatozise Neden Olan Tanı Konmamış Maternal HPV Enfeksiyonu

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HPV enfeksiyonu en sık anogenital siğil şeklinde kendini göstermesine rağmen enfekte bireylerin çoğu enfeksiyonun yayılmasında önemli olan subklinik hastalığa sahiptir. Bu tür bir yayılım perinatal dönemde olursa çocukluk çağında laringeal papillomatozis görülebilir. Oldukça zahmetli bir tedavi sürecine rağmen etkilenen çocukta komplikasyonlar gelişebilir. Bu nedenle mümkünse bulaşma önlenmelidir. Sezaryen ile doğum bulaşmayı engelleyebilir, ama maternal genital siğil varlığında rutin olarak önerilmez. Genital enfeksiyonları saptamak için tüm gebelerin jinekolojik muayenesi çok daha önemlidir. Genital siğili olan gebelerde, siğillerin medikal veya cerrahi tedavisinin veya sezaryenle doğumun gerekip gerekmediği konusunda karar verebilmek için daha yakın takip gereklidir. Ayrıca laringeal papillomatozisin erken saptanması amacıyla doğumdan sonra bebeğin periyodik olarak muayene edilmesi gerekir.
Burada tanı konmamış genital HPV enfeksiyonu olan ve bu enfeksiyonu bebeğine de bulaştıran bir hasta sunulmuştur. Bebekteki enfeksiyon defalarca cerrahi müdahale gerektiren laringeal papillomatozise neden oldu.

Anahtar Kelimeler: Trizomi 8 mozaizmi, Prenatal tanı, Ultrason bulguları

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