Is There Any Etiological Role of Human Papilloma Virus in Cutaneous Soft Fibromas?

DERİ YUMUŞAK FİBROMALARINDA İNSAN PAPİLLOMA VİRÜSLERİNİN ETYOLOJİK ROLÜ VAR MI?

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Summary

Although the cause of soft fibromas is unknown, it has been suggested that human papilloma virus is related to soft fibromas recently. Thirty-four soft fibroma specimens from 21 patients were analysed by polymerase chain reaction assay in order to detect human papillomavirus, but no positive results were observed.

Key Words: Skin tag, Acrochordon, Soft fibroma, Fibroepithelial polyp, Human papillomavirus, Polymerase chain reaction

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Özet

Yumuşak fibromların esas nedeni bilinmemesine rağmen, son zamanlarda insan papilloma virüsleriyle ilişkili olduğu öne sürülmektedir. Yirmi bir hastadan alınan 34 yumuşak fibrom örneği, insan papilloma virüslerini saptamak için polimeraz zincir reaksiyonu ile analiz edildi, ancak hiçbir pozitif sonuç gözlenmedi.

Anahtar Kelimeler: Deri eki, Akrokordon, Yumuşak fibrom, Fibroepitelyal polip, İnsan papilloma virüs, Polimeraz zincir reaksiyonu

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Cutaneous soft fibromas, also called "fibroepithelial polyps," "skin tags" or "acrochordons," are common benign lesions composed of loose fibrous tissue, and occurring mainly on the neck and major flexures of middle-aged and elderly people as small, soft, skin-colored or tan or brown, round or oval, pedinculated papillomas (1-3). Soft fibromas are cosmetically bothersome but asymptomatic. They may occasionally become symptomatic if the pedicle twists and infarction occurs (4). The cause is unknown, but development of lesions is associated with obesity, pregnancy, menopause, acromegaly, or a family history of papilloma (5). It also has been suggested that skin tags indicate a significantly increased risk of colonic polyps (6), however, it has not been confirmed by subsequent reports (7-8).

Human papillomavirus (HPV) is related to benign mucocutaneous lesions and malign tumours. It also has been suggested that HPV plays a part in the progression of soft fibromas (9). We investigated skin tags by polymerase chain reaction (PCR) assay to search for etiological role of human papilloma virus deoxyribonucleic acid (DNA) in cutaneous soft fibromas.

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Material and Methods

Thirty-four biopsy specimens were obtained from 21 patients (neck, axilla, groin and back) of both sexes with multiple skin tags. Specimens were divided into two pieces through longitudinal axis.

One of the twin pieces was sent to histological examination for confirmation. Others were saved at -80°C in the deep freezer until PCR analysis were done. Then DNA was extracted from skin tags by proteinase K digestion and phenol/chloroform. Extracted DNA was resuspended in 50 µl of water. Then all samples were processed with PCR assay using HPV primers (MY09, MY11 and type specific oligonucleotides) according to following thermal cycler program. After PCR master mix was prepared, thermal cycling was applied HPV-6,-11,-16 and -18 in this manner: The program was 40 cycles for 45 seconds at 94°C, for 45 seconds at 50°C and for 1 minute at 71°C (10). As positive controls, genital and common warts embedded in paraffin blocks were used.

Results

No positive result in 34 biopsy specimens were detected by using PCR. When also analysed by PCR using degenerate primers (MY 09 and MY 11) and type specific primers (HPV-6, -11, -16 and -18), no positive results of HPV DNA in 34 biopsies were obtained.

Discussion

Although there are many reports on human papillomavirus which is associated with many cutaneous or mucosal lesions, HPV-associated soft fibromas has been reported in only one study so far. In that study, authors analysed multiple soft fibromas by means of dot blot hybridization and polymerase chain reaction assays, aiming at detecting all known HPV types. They suggested that HPV plays a part in progression of soft fibromas, detecting the presence of HPV DNA type 6/11 in 88% of the skin tags analysed (9). But we were not able to detect the HPV DNA in 34 skin tags biopsy samples at all. Based on our data, it does not seem reasonable to suggest that human papillomavirus plays an etiological role in the progression of cutaneous soft fibroma.

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