

HUMAN PAPILLOMAVIRUS DETECTION AND GENOTYPING IN VULVA AND VAGINA ABNORMALITY LESIONS AND CANCER TISSUES FROM THAI WOMEN

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Abstract

Vulva and vagina cancers are rare diseases among all gynecological cancer worldwide, included Thailand, and typically affect women in later life. Persistent high risk human papillomavirus (HR-HPV) type infection is the one important cause for developing various abnormality lesions and cancer cells. In this study, we focused on HPV investigation and type specific distribution from Thai women with vulva or vagina abnormality lesions and cancer. Of 90 paraffin-embedded samples of vulva and vaginal abnormality/cancer histological confirmed were collected from Thai women, who were diagnosed in 2003 to 2011 at National Cancer Institute, Thailand. HPV DNA was detected and genotyped using polymerase chain reaction and enzyme immunoassay with GP5+/bio6+ consensus specific primers and digoxigenin-labeled specific oligoprobes, respectively. And human β -globin gene was used as the internal control. Overall results represented that HPV frequent was 16/34 (47.06%) and 8/20 (40%) of vulva cancer and abnormality lesions, respectively, whereas 3/5 (60%), 16/31 (51.61%) of vagina cancer, abnormality lesions, respectively were HPV DNA detected. HPV 16 is the most common frequent type in both cancers, followed by HPV 33, 35, 58, 45 for vulva lesions/cancer and HPV 18, 33, 35, 58 for vagina lesions/cancer. Interestingly HPV 18 showed less frequent in vulva site and could be detected as co-infection with other types. In addition to HPV 6 and 11, the two most non-oncogenic types were found in both of vulva and vagina abnormality or cancer cells. In conclusion, our data suggest that women with persistence high risk HPV type infection are at risk of developing vulva or vagina cancer and HPV 16 is observed at the highest frequent in these cancers. Although the sample size in this study was small and could not represented the overall incidence and prevalence in Thai women, but it is the interesting baseline data to continue further study for planning primary cancer screen or developing the efficiency prophylactic HPV vaccine in Thailand.

Keywords; Human papillomavirus, vulva, vagina, Thai women

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