

ABSTRACT

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Human papillomavirus (HPV) in mothers before and after delivery – a three year follow-up study.

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The Disputation was held in Turku, Finland, on the 4th of December, 2009.

Human papillomavirus (HPV) infections in mothers are important to consider since pregnancy may affect the outcome of the infection and the mother may transmit HPV to the child.

This thesis is part of the 3-year Finnish Family HPV Study on HPV infection dynamics within 329 families. The presence of maternal HPV antibodies and HPV DNA in placenta, umbilical cord blood and breast milk was examined. In addition, genital and oral HR-HPV carriage was studied among mothers with one or two pregnancies.

At enrollment, seropositivity to HPV 6, 11, 16, 18 and 45 was recorded in 53 %, 21 %, 35 %, 21 % and 9 % of the mothers, respectively. Age at sexual debut, number of sexual partners, a history of genital warts and antibodies to LR/HR-HPV predicted HR/LR-HPV-seropositivity. During follow-up 27 %, 14 %, 17 %, 17 % and 7 % of the mothers seroconverted to the tested HPV-types, respectively. Decay of HPV-antibodies was rare. The mother's new pregnancy was of minor impact in the outcome of oral and cervical HR-HPV infections.

HPV-DNA was present in 4.2 % and 3.5 % of the placentas and umbilical cord blood samples, and in 4.5 % and 19.7 % of the breast milk samples collected at day 3 and month 2 postpartum, respectively. HPV-positivity in placenta/cord blood was related to a history of abnormal pap-smears or genital warts, and raised the risk of the neonate being HPV-positive at birth. The mode of delivery did not predict the HPV-status of neonate, placenta, or cord blood. HPV DNA in breast milk was associated with oral HPV status of the father, but not with HPV status of the neonate.

The results indicate that exposure to HPV is common and that part of the exposure apparently takes place already early in life. Contrary to the common claim, pregnancy is not a risk factor for HPV.

Keywords: human papillomavirus, HPV DNA, mother, pregnancy, HPV antibodies, seroprevalence, seroconversion, seropersistence, antibody decay, breast milk, placenta, umbilical cord blood, infant

The full text can be found at:

<https://oa.doria.fi/handle/10024/50436>

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