

FRONT-TO-BACK WIPING AND DABBING BEHAVIOUR WIPING POST-TOILET SIGNIFICANTLY ASSOCIATED WITH ANAL NEOPLASIA & HR-HPV CARRIAGE IN WOMEN WITH A PREVIOUS HPV-MEDIATED GYNAECOLOGICAL NEOPLASIA

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Background: Anal cancer is a human papillomavirus (HPV)-mediated neoplasia of the anal squamous epithelium. Anal cancer is much more common among women, particularly those with a previous high-grade gynaecological neoplasia.

Methods: Cross-sectional study of women with a previous HPV-mediated gynaecological neoplasia in Tasmania, Australia. Women presenting for follow-up gynaecological care had anal swab samples taken for anal cytology by Hologic Liquid ThinPrep, followed by HPV genotyping. Women with abnormal anal cytology were invited for high-resolution anoscopy. Potential risk factors, including post-toilet wiping behaviours, were queried by questionnaire while clinical covariates were extracted from medical records. Covariates of anal outcomes evaluated by log-binomial and log-multinomial regression.

Results: From 163 women enrolled in the study, 65 (39.9%) had abnormal cytology, with 46 (28.2%) being high-grade. Of the 50 women with abnormal anal cytology having high-resolution anoscopy, 32 (64.0%) had abnormal histology with 13 (26.0%) being high-grade. Of the 123 women tested for HR-HPV DNA, 48 (39.0%) had HR-HPV detected, the most common genotypes being 16 and 51 (14/123, 11.4% for both).

In addition to some known anal cancer risk factors, we found front-to-back wiping was associated with significantly increased (Prevalence ratio (PR) range: 1.99 – 3.60) prevalence of cytological and histological abnormality and HR-HPV carriage/co-carriage, while dabbing post-toilet was significantly associated with decreased prevalences (PR range: 0.50 – 0.62).

Conclusions: Post-toilet wiping behaviours significantly modulated the prevalence of anal cytological, histological and HR-HPV carriage outcomes. This suggests a biologically plausible mechanism for HR-HPV introduction and the higher frequencies of anal neoplasia in women.

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