

CLEARANCE OF ANAL HIGH-GRADE SQUAMOUS INTRAEPITHELIAL LESIONS (HSIL) IN A COHORT OF GAY AND BISEXUAL MEN (GBM)

Poynten IM¹, Jin F¹, Hillman RJ², Templeton DJ^{1,3}, Law C², Roberts J⁴, Cornall A^{5,6}, Phillips S⁵, Machalek DA⁵, Ekman D⁴, McDonald R⁴, Farnsworth A⁴, Garland SM^{5,6}, Fairley CK⁷, Tabrizi SN^{5,6}, Grulich AE¹ on behalf of the SPANC research team

¹The Kirby Institute, University of New South Wales, Sydney;

²St Vincent's Hospital, Sydney;

³RPA Sexual Health, Sydney;

⁴Douglass Hanly Moir Pathology, Sydney;

⁵Department of Microbiology and Infectious Diseases, Royal Women's Hospital and Murdoch Childrens Research Institute, Melbourne;

⁶Department of Obstetrics and Gynaecology, University of Melbourne, Melbourne;

⁷Melbourne Sexual Health Centre, Melbourne, Australia

Background: GBM are at greatly increased risk of anal cancer. Persistent HSIL is the presumed precursor lesion. We report the 12-month clearance of anal HSIL in a cohort of GBM with baseline HSIL. We investigate risk factors associated with persistent lesions.

Methods: Participants in the Study of the Prevention of Anal Cancer underwent cytological and histological assessments and human papillomavirus (HPV) genotyping at baseline, 6-month and 12-month follow-up visits. Composite HSIL was defined as detection of cytological and/or histological HSIL, clearance as a positive baseline finding followed by two negative findings.

Results: In 617 men recruited by 2016, 439 (71.2%) men attended all three visits. Among 390 men with full results for all visits, 40.8% (n=159, 95% CI 35.9-45.8) had composite HSIL at baseline. The overall 6-month clearance rate was 43.9 per 100 person-years (95% CI 31.4-61.5).

Older men were less likely to clear their HSIL (p=0.005). There was no association between HIV status, cigarette smoking, lifetime or recent sexual behaviour and HSIL clearance. HSIL-AIN3 lesions were half as likely to clear as HSIL-AIN2 lesions (HR 0.42, 95% CI 0.20-0.85, p=0.016). Multi-octant lesions were also less likely to clear than single octant lesions (HR 0.33, 95% CI 0.09-1.25, p=0.055). HPV16 infection at baseline (HR=0.15, 95%CI 0.06-0.36, p<0.001) was highly associated with lack of HSIL clearance. Compared with participants who were consistently high risk HPV (HRHPV) negative, it was extremely unlikely for participants with persistent HPV16 or persistent type-specific non-HPV16 HRHPV to clear their HSIL (HR 0.03, 95% CI 0.001-0.009 and HR 0.10, 95% CI 0.03-0.29 respectively).

Conclusion: Clearance of anal HSIL was not uncommon in sexually active GBM. Persistence of lesions was highly associated with persistent HRHPV infection, higher grade and larger size of lesion. Repeated testing for HRHPV should be considered as a screening strategy for anal cancer prevention in high-risk populations.

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