

The prevalence of hrHPV among the isolated community in the Highland of Bario, Sarawak, East Malaysia

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Abstract

Background Malaysia has introduced the free Pap smear as the primary cervical cancer screening program since the 1960s but has only achieved the national coverage of 22%. The coverage would be much lower in the rural communities especially in Sarawak where many villages are still inaccessible by road, and communities are living in low resource settings. In this study, we have evaluated Qiagen's careHPV system as a point-of-care HPV diagnostic test together with the visualization using acetic acid (VIA) in the isolated community in the Highland of Bario which are predominantly from the Kelabit ethnicity. Methods Women attending the cervical cancer outreach program were recruited. Consent was obtained and a cervical swab was clinician-collected and screened for High-risk HPV DNA using the careHPV system. Cervical examination using VIA was offered to all women age <50-year. hrHPV positive women were recruited during their follow-up session and the second cervical swab was collected for HPV genotyping using consensus primer-nested PCR to elucidate the infecting HPV genotypes. Results Seventy-five women from the age of 27-83 (mean age 55) attended the cervical cancer screening clinic and 8% (n=6/75) of them were positive for hrHPV. Only 33 women were screened using VIA and 21.2% (n=7/33) were found to be positive. A majority of the women (58.6%) were above the age of 50-year and not recommended for VIA to be performed. Thus, it was not feasible to correlate the results obtained from the HPV DNA test and VIA. Only four hrHPV positive women returned for follow-up and genotyping revealed HPV52 in 2 of four women tested suggesting that HPV52 may be the predominant genotype in Bario. Conclusions The careHPV system is portable and can be used in low resource settings as long as reliable electricity is available. We found that careHPV DNA test is more objective compared to VIA and can be used to screen women outside the recommended eligible age. This is especially true for older women in the rural who have never had any form of cervical cancer screening before.

Introduction

Cervical cancer is the second most common killer in Malaysian women after breast cancer. Around 1682 women are diagnosed with the disease annually and 944 die from the disease (1). The Ministry of Health, Malaysia has introduced free Pap smear as the primary cervical cancer screening test since