Prevalence of Human Papillomavirus among Men and Women in Western Saudi Arabia 2017–2018

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Introduction: The Human papillomavirus (HPV) is highly prevalent in sexually active men and women and has been associated with several cancers. There are >100 genotypes of HPV, with some types affecting humans specifically. High-risk HPV genotypes such as types 16 and 18 are responsible for 70–80% of all cervical cancer cases worldwide. In Saudi Arabia, data on HPV prevalence remains controversial and limited. In this study we focused on determining the prevalence of HPV in men and women in the Western region of Saudi Arabia.

Materials and Methods: Samples included 119 self-collected vaginal swab samples from females attending gynecological clinic at King Abdul Aziz University Hospital, and 966 archived serum samples from healthy male and female blood donors. Serum samples were screened by ELISA for HPV types 6, 11, 16 and 18 IgG antibodies, and swabs were tested for HPV by Nested PCR.

Results: Out of the 966 serum samples, only 15 samples (~1.55%) were positive for HPV IgG antibodies, suggesting low seroprevalence of HPV types 6, 11, 16 and 18 in the general population. Of the 119 tested vaginal swabs, 7 samples were found positive (~5.88%) for HPV DNA in which genotypes 11, 16, 58, 62, 66 and 67 were identified.

Discussion: The low rate of seroprevalence of HPV in the general population clearly reflects the lack of the vaccine availability in Saudi Arabia. Also, the finding that 5.88% of the tested vaginal samples were positive for HPV shows that HPV is not uncommon among high-risk groups such as adult women.

Conclusion: Awareness, sexual education and vaccine use will help in controlling the spread of the infection. Further studies and more samples are clearly needed to better understand the true prevalence of HPV and thus reducing the incidence of cervical cancer in Saudi Arabia.

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Superior Efficacy of Dolutegravir (DTG) Plus 2 Nucleoside Reverse Transcriptase Inhibitors (NRTIs) Compared with lopinavir/ritonavir (LPV/r) Plus 2 NRTIs in Second-Line Treatment — 48-week Data from the DAWNING Study

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Background and Purpose: DAWNING is a noninferiority study comparing DTG+2NRTIs with a current World Health Organization–recommended regimen of LPV/r+2NRTIs in HIV-1–infected adults failing first-line therapy (HIV-1 RNA ≥400 c/mL) of an NNRTI+2NRTIs. Before a 24-week interim analysis, the Independent Data Monitoring Committee recommended discontinuation of the LPV/r arm due to superior efficacy of DTG+2NRTIs based on available data; the study protocol was amended to allow ongoing LPV/r participants to switch to the DTG arm.

Methods: Patients were randomized (stratified by Screening plasma HIV-1 RNA and number of fully active NRTIs) to 52 weeks of open-label treatment with DTG or LPV/r combined with 2 investigator-selected NRTIs, including ≥1 fully active NRTI based on Screening resistance testing. The primary endpoint was the proportion of participants achieving HIV-1 RNA <50 c/mL at Week 48 (Snapshot algorithm).

Results: 624 adults were randomized and treated. Patients were well matched for demographic and baseline characteristics. At Week 48, 84% (261/312) of participants on DTG vs 70% (219/312) on LPV/r achieved HIV-1 RNA <50 c/mL (adjusted difference 13.8%; 95% CI, 7.3–20.3; $P < 0.001$ for superiority). The difference was primarily driven by lower rates of Snapshot virologic nonresponse (VL ≥50 c/mL) in participants receiving DTG. The overall safety profile of DTG+2NRTIs was favorable compared with LPV/r+2NRTIs, with more drug-related AEs reported in the LPV/r group. Of 11 DTG participants who met protocol-defined virologic withdrawal criteria through Week 52, one had treatment-emergent primary INSTI- and NRTI-resistance mutations, while another had INSTI-resistance mutations only; in comparison, 30 LPV/r participants met virologic withdrawal criteria, and 3 had emergent NRTI-resistance mutations but PI-resistance mutations.

Conclusions: At Week 48, DTG+2NRTIs demonstrated superior efficacy and a favorable safety profile compared with LPV/r+2NRTIs. The study provides important information to help guide second-line treatment decisions in resource-limited settings.

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