

The changes of HR-HPV infection and cervical lesions detection, a ten-year retrospective study

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Abstract

Objective: To understand the changes of high-risk human papillomaviruses (HR-HPV) infection and detection of cervical high-grade squamous intraepithelial lesion or higher (HSIL+) from 2012 to 2021. **Design:** Retrospective observational study. **Setting:** A tertiary hospital in northwest China. **Population:** Women aged >25 years who underwent primary HR-HPV testing and referred for colposcopy biopsy from January 2012 to December 2021. **Methods:** The trends of HR-HPV infection and detection of HSIL+ were described and analyzed. All participants were divided into four groups with 25-35, 36-45, 46-55, and >55 years, respectively. **Main outcome measures:** HR-HPV infection was screened out by HPV examination. Cervical cancer and HSIL were confirmed in biopsies. **Results:** Our data indicated that the HR-HPV infection rate showed a general decreasing trend (APC = -7.34%, 95%CI: -11.38% ~ -3.13%) from 2012 to 2021. Population with the highest infection rate of HR-HPV was over 55 years group. On the contrary, the detection rates of cervical HSIL+ showed an increasing trend (APC=15.30%, 95%CI: 9.64% - 21.25%). However, the detection rate of cervical cancer showed a downward trend (APC = -12.65%, 95%CI: -17.68% - -7.32%). Unsurprisingly, the detection rate of cervical lesions in population over 55 years was the highest among different groups. The common HR-HPV subtypes were HPV52 (20.96%), HPV16 (16.70%), HPV58 (13.95%), HPV56 (13.04%) and HPV51 (12.31%). **Conclusions:** Our data suggested that proactive prevention and screening measures helped to decrease HR-HPV infection rates and decrease detection rate of cervical cancer past ten years and should be further advocated in other areas.

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