

# HPV

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## 【摘要】 目的

方法 2017 6 托克旗3个农村地 开展以  
基础 多 心 共纳入 对象9 517名 所有 对象均通过 采样方  
法采集2份 阴道 分泌物 careHPV PCR HPV 对  
基 PCR方法 HPV 还 方法 阴道 阴道 有  
阴道

结果 HPV 1 842 21.83% HPV 269 24.93% 个  
HPV 有  $\chi^2=5.328 P=0.021$  样 1  
▲ 2.83% 30/1 059 | ▲ 0.87% 73/8 378 | 有  $\chi^2=33.509 P<$   
0.001 | 样 2 以 1.04% 11/1 059 ;  
0.95% 80/8 378  $\chi^2=0.069 P=0.79$  | 样 2 以  
HR-HPV 均 HPV16 52 58 多  
41.37% 44.35%  $\chi^2=0.764 P=0.382$  结论 HPV  
对 时 应 对 HPV16 52 58

视

【关键词】 ; 基因

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## Comparison of high-risk human papillomavirus infection rate and genotype distribution between Han and Mongolian women

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## 【Abstract】 Objective

**Methods** In June 2017, a multicenter, population-based study for cervical cancer screening in low-resource settings in China was conducted in three rural areas: Xiangyuan and Yangcheng counties in Shanxi province, and Etuoke county in Inner Mongolia Autonomous Region. A total of 9 517 women aged 30–65 years were included in the study, and two cervical and vaginal secretion samples were collected from them for HPV and PCR-based HPV DNA tests. The positive samples in any of two tests were used for PCR-based HPV genotyping test by using Sansure-pioneered One-Step Fast Release technology. Women with positive results in any the HPV tests were referred for colposcopy and punch biopsy was given if cervical intraepithelial neoplasia lesion (low-grade lesion or worse) was suspected in colposcopy evaluation. Endocervical curettage was performed if women had an unsatisfactory colposcopy exam (the squamocolumnar junction was not completely visible). Pathological detection result was used as the golden standard of diagnosis. **Results** HR-HPV infection rates in Han and Mongolian women were 21.83% (1 842/8 438) and 24.93% (269/1 079), respectively. There were statistical differences in HPV infection rates between the two ethnic groups ( $\chi^2=5.328, P=0.021$ ). The detection rate of cervical intraepithelial neoplasia grade 1 in Mongolian women (2.83%) was higher than that in Han women (0.87%), and the difference was statistically significant ( $\chi^2=33.509, P<0.001$ ). There were no significant differences in cervical intraepithelial neoplasia grade 2 or worse detection rate between the two ethnic groups Mongolian woman: 1.04% (11/1 059), Han Woman: 0.95% (80/8 378),  $\chi^2=0.069, P=0.793$ . Among Han and Mongolian women with cervical intraepithelial neoplasia grade 2 or worse, the three most common HR-HPV types were HPV16, HPV52 and HPV58. There was no significant difference for multiple infection rate between Han and Mongolian women (41.37% vs. 44.35%,  $\chi^2=0.764, P=0.382$ ). **Conclusions** The results show that HPV infection rate in Mongolian women was higher than that in Han women. Close attention should be paid to HPV16, 52 and 58 in the prevention and control of cervical cancer in Han and Mongolian women.

**【Key words】** Human papillomavirus; Genotype

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本 本 国

high risk-human

papillomavirus HR-HPV

careHPV PCR HPV

HPV 本 基于PCR HPV

HPV

1-3

HPV

HPV 比 我国汉

少 基于此 本 3.

HPV 1 careHPV 国 Qiagen

基于HC2 本 HR-HPV DNA

RNA DNA : RNA

DNA : RNA

1. 2017 6 国

IARC /国 基

基

WHO/ DNA : RNA

被 DNA : RNA 偶 通 信号

大 化 光 14 种 HR-HPV

HPV16 18 31 33 35 39 45 51 52 56 58 59 66

68 但 能单独 本 出

HPV DNA  $\geq 1.0$  pg/ml 即

2 PCR HPV 湖南圣湘 限

15种HR-HPV核 试剂盒 湖南圣湘

限 国械注 20163401304

2. 基 2 PCR HPV 该 步 快速

careHPV		PCR HPV	
HR-HPV	HPV16 18 31 33 35 39 45 51 52	HR-HPV	HPV16 18 31 33 35 39 45 51 52
53 56 58 59 66 68	≤39	HR-HPV	HPV16 18 31 33 35 39 45 51 52
20163401295		PCR HPV	HPV16 18 31 33 35 39 45 51 52
同	以	PCR HPV	HPV16 18 31 33 35 39 45 51 52

变	(n=8 438)	征	(n=1 079)
龄岁 $M(P_{25} \sim P_{75})$	47(42 ~ 53)	48(43 ~ 53)	
经初潮 龄岁 $M(P_{25} \sim P_{75})$	15(14 ~ 16)	16(14 ~ 17)	
初次 龄岁 $M(P_{25} \sim P_{75})$	22(21 ~ 23)	21(20 ~ 23)	
经 龄岁 $M(P_{25} \sim P_{75})$	50(48 ~ 52)	49(47 ~ 52)	
文化程度 (%)			
以下	26.89(2 267/8 431)	54.31(586/1 079)	
初 以上	73.11(6 164/8 431)	45.69(493/1 079)	
3 (%)			
<2	98.58(8 313/8 433)	98.60(1 059/1 074)	
≥2	1.42(120/8 433)	1.40(15/1 074)	

上 15 HR-HPV  
 4. 疾 确 诊 结 果 作 最 终 疾 诊 断 金 均 由 医 院 肿 瘤 医 院 专 家 盲 下 读 片 或 质 控 宫 颈 管 上 皮 瘤 变 命 名 系 统 记 录 诊 断 结 果 正 常 宫 颈 上 皮 瘤 样 变 1 级 cervical intraepithelial neoplasia grade 1 CIN1 宫 颈 上 皮 瘤 样 变 2 级 cervical intraepithelial neoplasia grade 2 CIN2 宫 颈 上 皮 瘤 样 变 3 级 cervical intraepithelial neoplasia grade 3 CIN3 宫 颈 癌 如 未 达 到 下 列 结 果

0.021 HPV52 4.21% 最 常  
 HR-HPV 19.27% 次  
 HPV58 3.42% 16 3.09% 53 2.96% 68 2.69%  
 51 2.39% 最 常 HR-HPV  
 HPV58 3.34% 68 3.34% 52 3.15% 16  
 2.78% 56 2.50% 53 2.32% 以 下  
 感 染 : HPV18 0.96% vs.  
 1.85%  $\chi^2=7.276 P=0.007$  HPV31 1.27% vs.  
 2.04%  $\chi^2=4.251 P=0.039$  HPV35 0.65% vs.  
 1.58%  $\chi^2=10.872 P=0.001$  HPV45 0.46% vs.  
 0.93%  $\chi^2=4.031 P=0.045$  表 2

正常 : careHPV 宫 颈 正 常 6-7  
 PCR 结 果 均 HPV 4-5  
 变 4-5  
 5. 统 计 表 示  
 以 下 表 示  
 两 民 龄 服 从 正 态 布 故 以  $M P_{25} \sim P_{75}$  描 述 同 民 HPV 感 染 同 变 差 异 统 计 所 均 双 侧 验 以  $P < 0.05$  差 异 统 计 所 均 双 侧 验

两 民 31 ~ 45 岁 HPV 龄 感 染  
 46 岁 HPV 感 染 上  
 50 岁 上  
 55 岁 过 同 龄  
 HPV 感 染 2 HPV 感 染  
 29.50% 36.89% 两 差 异 统 计  
 $\chi^2=4.585 P=0.032$  表 3

结 果  
 1. 征 : 共 纳 入 8 438 1 079  
 龄  $M P_{25} \sim P_{75}$  47  
 42 ~ 53 岁 48 43 ~ 53 岁 经 初 潮 龄  
 15 14 ~ 16 岁 16 14 ~ 17 岁 初 次 龄  
 22 21 ~ 23 岁 21 20 ~ 23 岁 73.11%  
 6 164/8 431 文 化 程 初 以 上  
 45.69% 493/1 079 差 异 统 计  
 $\chi^2=342.497 P < 0.001$   
 征 表 1  
 2. HPV 感 染 : HPV 感 染  
 21.83% 1 842/8 438 24.93% 269/  
 1 079 两 民 差 异 统 计  $\chi^2=5.328 P=$

3. 宫 颈 变 出 HR-HPV 布 :  
 CIN1 CIN2+ 出 0.87%  
 73/8 378 0.95% 80/8 378  
 2.83% 30/1 059 1.04% 11/1 059 两 民 CIN1  
 出 差 异 统 计 义  $\chi^2=33.509 P < 0.001$   
 CIN2+ 出 差 异 统 计 义  $\chi^2=$   
 0.069  $P=0.793$  表 3  
 宫 颈 变 出 HPV16 感 染  
 所 均 最 58.82% vs. 34.14%  
 CIN1 变 出 HR-HPV 布 6 次  
 HPV16 58 51 52 68 56 次  
 HPV16 56 58 18 51 52 68 HPV16 感 染 所  
 差 异 统 计 义  $\chi^2=4.162 P=0.041$   
 两 民 CIN2+ HR-HPV 布 3



HPV16 , 内其他 报道 完全一致: 一些 [12-14] , HPV16 , HR-HPV 基 而, 也有 [15-17] , 江苏 广东 浙江省 HPV52 流行超过 HPV16 以上 表明 HPV 存 地区 尽管 同 HPV16 顺 自 人群中存 , 但有宫颈癌 人群中 HPV16 首 HPV16 致癌力 强, 故其 有宫颈癌 人群中所占 例 HPV52 58 CIN2+ 中 排 HPV16 之后 , 其他 中东 亚 CIN2 一致 [18-19] , 制 针对中 HPV 预防 疫苗 , 除 宫颈癌 关 HPV16 18 外, 还应提 对 HPV52 58 视度, 进而提 人群 HPV 免疫效 , 从而预防宫颈癌 发生 段仙芝等 [20] CIN1

病 40.14% vs. 46.11% ,  $\chi^2=2.361$  ,  $P=0.124$  CIN1 50.00% vs. 46.43% ,  $\chi^2=0.102$  ,  $P=0.749$  CIN2+ 48.10% vs. 27.27% ,  $\chi^2=1.689$  ,  $P=0.194$  中 学

### 讨 论

HPV HR-HPV HPV52 58 16 53 68 51 HR-HPV HPV58 68 52 CIN2+ HR-HPV HPV16 52 58 16 56 53 3 HPV 中 HPV reHPV PCR HPV

CIN2+ 2.87% 1.80% , CIN1 近, CIN2+ CIN2+ 同样 宫颈癌患 中 学 样 但 CIN2+ 样 内外关 宫颈癌发生 一 ree等 [22] , 发生宫 一 明等 [23] 宫颈癌 度 , HPV 有 且 宫颈癌 , 明 HPV

HR-HPV 患病 HPV 汉 内其他 报道一致 [9] 中 来自 自治区鄂托克旗, 该地区地 域辽阔, 人口 散, 且 数 生活 边远牧区, 距离医疗机构远, 医疗卫生服务 基 中 人群 17个荟萃 析 , HPV 呈现双峰现象, 农村 双峰 15~24岁 45~49岁 [8] 外 同样 , 45~50岁 围绝经期会 现 HPV 第二 峰 [10-11] 基 一致, 但由 <30岁年龄组 样 量 少, 故小年龄组 HPV 峰 明 进一步 析发现 年龄 50岁 之后开始上升, 且 汉 上升更 ,

自 人群中 HPV52

族。汉族女性常见的 HPV 感染型别为 HPV52、58、16; 蒙古族女性最常见的 HR-HPV 型别为 HPV58、68、52。尽管型别分

病的女性 CIN2+ HR-HPV 型别分的 HPV16、52、58, 汉族 蒙古族女性行的 HPV16、52、58 型的

利益冲突

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