Lt Col Mahima Lall
Classified Specialist (Path & Micro), Ex Study leave,
AIIMS, New Delhi, India
E-mail address: drmahimalall@yahoo.com

22 May 2015
Available online 6 July 2015

DOI of original article: <http://dx.doi.org/10.1016/j.mjafi.2015.06.018>

0377-1237/\$ – see front matter
© 2015, Armed Forces Medical Services (AFMS). All rights reserved.
<http://dx.doi.org/10.1016/j.mjafi.2015.06.012>

Reply

Dear Editor,

We appreciate and acknowledge the concerns of the reader regarding the high prevalence of HPV DNA in the inflammatory smears¹ and we also believe that follow-up studies, including immune-suppressed subjects are essential in this population. However, due to the fleeting nature, longitudinal studies are very difficult to conduct in this population.

Regarding the reader's suggestion about methodology and use of primers in our original work,¹ we wish to explain our point from the perspective that our study was specifically aimed at assessing the prevalence of HPV high-risk (HR) types (16 & 18). These two HR types have been found to be virtually universal in their involvement in cervical cancers.² Considering the vast genetic diversity of HPV types, a number of consensus/degenerate primers (MY09/11, GP5/6, SPF1/2 etc.) targeted at the highly conserved L1 capsid gene region, capable of identifying and amplifying a variety of HPV types were developed.³ The MY09/11 primer pair, which we used in our study, is among the most widely used primers for HPV screening, worldwide.³ This system involves a pair of degenerate oligonucleotides, competent of sensitive amplification (1 viral copy per 100 host cells) of nearly 30 divergent HPV types, including the HR types 16 & 18.⁴ Hence the MY09/11 based PCR (MY-PCR) system remains an assay of choice for screening of samples, particularly for certain clinically relevant HPV types including 6, 11, 16, 18 etc.

On the other hand, the MY primers were redesigned to develop the PGMY primer system for improved amplification of additional HPV types.⁵ The PGMY primer system comprises a total of 18 oligonucleotides, targeting the same primer binding regions, as MY primers. However, owing to its improved capability to amplify diverse HPV types as compared to MY primers, the PGMY primer system is more suited for studies specifically aimed at discovery of new HPV types. Nevertheless, no statistically significant difference in the HPV DNA detection efficiency between these two primer systems has been registered in comparative studies.^{6,7}

In conclusion, the selection of primer systems for HPV studies should be based on the specific objectives of the study. In routine prevalence studies, where incidence of certain well recognized HPV types (6, 11, 16, 18, etc.) is concerned, the simple, sensitive and economical MY PCR based detection should be preferred for screening. In contrast, for studies aimed at discovery, the PGMY PCR system should be preferred for broad range amplification of uncharacterized or poorly characterized

HPV types. In our opinion, use of PGMY system (with 18 primers) instead of MY (2 primers) for routine HR HPV 16 & 18 prevalence studies will only increase the per sample screening cost, without any significant amendment in prevalence information.

REFERENCES

1. Datta S, Agarwal M, Chatterjee S, Gogoi HK, Veer V, Singh L. Detection of human papillomavirus in women attending pap cervical screening camp at a peripheral hospital of North Eastern India. *Med J Armed Forces India*. 2015;71:182–185.
2. Bosch FX, Lorincz A, Muñoz N, Meijer CJ, Shah KV. The causal relation between human papillomavirus and cervical cancer. *J Clin Pathol*. 2002;55:244–265.
3. Burd EM. Human papillomavirus and cervical cancer. *Clin Microbiol Rev*. 2003;16:1–17.
4. Schiffman MH, Bauer HM, Lorincz AT, et al. Comparison of southern blot hybridization and polymerase chain reaction methods for the detection of human papillomavirus DNA. *J Clin Microbiol*. 1991;29:573–577.
5. Gravitt PE, Peyton CL, Alessi TQ, et al. Improved amplification of genital human papillomaviruses. *J Clin Microbiol*. 2000;38:357–361.
6. Cai YP, Yang Y, Zhu BL, et al. Comparison of human papillomavirus detection and genotyping with four different primer sets by PCR sequencing. *Biomed Environ Sci*. 2013;26:40–47.
7. Castle PE, Schiffman M, Gravitt PE, et al. Comparisons of HPV DNA detection by MY09/11 PCR methods. *J Med Virol*. 2002;68:417–423.

Sibnarayan Datta*

Scientist 'C', Molecular Virology Laboratory, DRL Tezpur (DRDO), India

Lt Col Manisha Agarwal

Graded Specialist (Pathology), Study Leave, AIIMS, New Delhi, India

*Corresponding author.

E-mail address: sndatta1978@gmail.com

Available online 15 July 2015

DOI of original article: <http://dx.doi.org/10.1016/j.mjafi.2015.06.012>

0377-1237/\$ – see front matter
© 2015, Armed Forces Medical Services (AFMS). All rights reserved.
<http://dx.doi.org/10.1016/j.mjafi.2015.06.018>