

Cervical Cancer Prevention In Nigeria: Issues Arising

A Kolawole

Citation

A Kolawole. *Cervical Cancer Prevention In Nigeria: Issues Arising*. The Internet Journal of Genomics and Proteomics. 2012 Volume 6 Number 2.

Abstract

Dear Editor,

There are 36.59 million Nigerians aged 15 years and older who are at risk of Cervical Cancer (CC) (1). Annually 9,922 women are diagnosed with the cancer and 8,030 die (2) many of these due to late presentation or suboptimal treatment. The high CC incidence of 16.7 per 100,000 women and Age Standardized incidence rate of 28.5% (3). Some studies gave incidence rates of 25-30 per 100,000 women (1). These figures are hospital based and are thus grossly underestimated. Cancer of cervix is now rightly considered a Sexually Transmitted Infection (STI) with Human Papilloma virus (HPV) as its cause; the evidence for this is overwhelming (4,5). HPV is the commonest viral STI affecting 660 million people globally (6). It is the commonest STI in United States of America which also has one the most organized cervical cancer screening programs (7). Nigeria has a high prevalence of STIs including HPV. HPV is widely spread in all states in Nigeria.

The overall prevalence of HPV in Ibadan [from Nigeria arm of International Agency Research in Cancer (IARC) study] was 26.3%; and 24.8% in women without cervical lesions (8). The High risk HPV (HR-HPV) was predominant (19.7%) and was mostly due to viral types 16, 31, 35, 58. Low risk (LR-HPV) were found in 6.6% and mixed infections with more than one HPV type occurred in 33.5% of HPV positive cases. Although there was a small peak in women younger than 25 years, HPV prevalence remains persistently high in all age groups, Figure 1 (8,9). Also, HPV 16 appeared to play a smaller role in CC in Nigeria than in Europe (10,11). A similar incidence of 21.6% was found in Okene, North-central Nigeria with HR-HPV prevalence of 16.6% and 3.5% having mixed infections (12).

The main risk factors contributory to HPV in Nigeria; were being unmarried, illiterate, being positive for anti-Herpes Simplex Virus (HSV) antibodies, tobacco use [Odds Ratio

(OR) of 1.6], parity, multiple sex partners of women (OR of 1.35) and their spouses' extramarital affairs (OR 1.83 if with sex worker), see table 1. (8) Consequently Nigeria has a high prevalence of cervical cancer and together with other developing countries contributes 85% to global cases (3). This is mostly due to the absence of an organized cancer screening program. Most Nigerian cases present with advanced disease usually above Stage II (13) when effective treatment is neither possible nor cost effective. The prevention of Cancer of cervix should therefore be top priority in Nigeria.

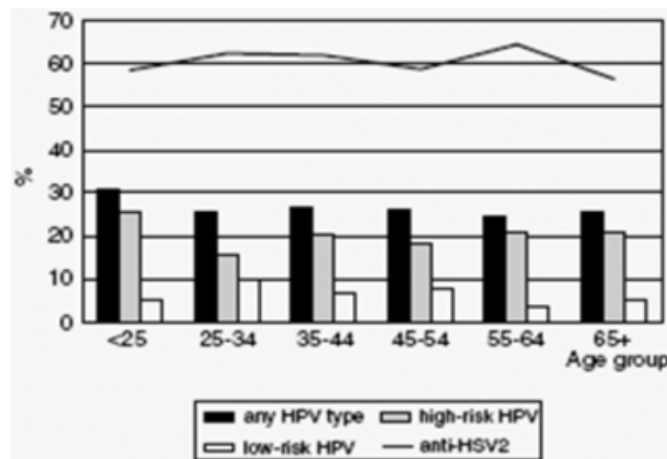
Globally, the Screening tool that revolutionized cervical cancer prevention was Papanicolaou's Smear (Pap smear) and liberal colposcopy. More recently addition of HPV testing of cytology specimens has improved diagnosis. Introduction of 'Thin Prep', liquid based cytology and automated Sampling techniques has improved effectiveness of the Pap Smear. However, since this model is too expensive for Nigeria, alternatives like Visual Inspection with Acetic Acid (VIA), Visual Inspection with Acetic Acid and Magnification (VIAM), (14), Speculoscopy and down-staging procedures can be promoted especially in rural areas.

The polyvalent and bivalent HPV vaccines are major tools for primary prevention. Although HPV vaccination is an attractive, cost-effective option, without international assistance with funding it will remain inaccessible to many Nigerian adolescents and youths. Meanwhile there is urgent need for baseline studies nationwide to determine the distribution pattern of prevalent HPV serotypes in a vast and diverse country like Nigeria. This will enable us know the applicability of the current bivalent Cervarix^R (Glaxo Smithline Kline) and quadrivalent Gardasil^R vaccines (Merck) to our populace. There is also need to carry out pilot vaccination programs prior to the introduction of HPV vaccination nationally. This requires both political will and

deployment of resources. Nigeria should not lag behind the global effort of prevention of cervical cancer, if neighboring African countries like Togo have approved the vaccine Nigeria should not be left out. Finally the development of a National Cervical Cancer Screening program and prevention framework should be of paramount importance.

Figure 1

Figure 1: Age-specific prevalence of HPV and anti-HSV antibodies in Nigeria



Source Thomas et al 2004

Figure 2

Table 1: Summary of results from the Ibadan study

Characteristics	Number of women	HPV positive		OR ^a	95% CI
		No	(%)		
Age (years)					
<25	120	37	(30.8)	1	
25-34	189	48	(25.4)	0.8	(0.5-1.3)
35-44	134	36	(26.9)	0.8	(0.5-1.4)
45-54	196	51	(26.0)	0.8	(0.5-1.3)
55-64	172	42	(24.4)	0.7	(0.4-1.2)
≥65	121	31	(25.6)	0.8	(0.4-1.4)
X ² for trend				0.74	p = 0.39
Education					
Primary or better	495	121	(24.4)	1	
Illiterate	417	117	(28.1)	1.7	(1.1-2.5)
Chewing habit					
No	600	147	(24.5)	1	
Yes	331	98	(29.6)	1.4	1.0-1.9
Marital status					
Married	687	178	(25.9)	1	
Single	62	25	(40.3)	2.1	(1.1-3.9)
Divorced/widowed	183	42	(23.0)	0.8	(0.5-1.3)
Number of pregnancies					
0	57	22	(38.6)	1.7	(0.8-3.4)
1-2	134	39	(29.1)	1	
3-4	164	45	(27.4)	0.8	(0.5-1.4)
5-6	230	49	(21.3)	0.6	(0.3-1.0)
≥7	326	87	(26.7)	0.7	(0.4-1.3)
X ² for trend				1.96	p = 0.16
Age at first pregnancy (years)					
≥25	253	69	(27.3)	1	
20-24	479	115	(24.0)	0.8	(0.6-1.2)
≤19	132	38	(28.8)	1.0	(0.6-1.7)
X ² for trend				0.02	p = 0.90

HPV= Human papillomavirus ^aSome figures do not add up to the total because a few are missing
^bAdjusted for age. (Source Thomas et al 2004)

Odds ratios (OR) for HPV positivity and corresponding 95% confidence intervals (CIs) according to socio-demographic

and reproductive characteristics 932 women in Ibadan, Nigeria.

References

1. Adewole IF, Benedet JL, Crain BT, Follen M., Evolving a strategic approach to cervical cancer control in Africa. *Gynecologic Oncology* 2005;99: S209 – S212
2. WHO/ICO. Information on HPV and Cervical Cancer (HPV Information Centre). Summary report on HPV and Cervical Cancer statistics in Nigeria.. Available at: www.who.int/hpvcentre ,2007 [Accessed on April 6,2008]
3. Globocan 2008 Country fast stats-Nigeria. <http://globocan.iarc.fr/factsheets/populations/factsheet.asp?u no=566>. Accessed 23/5/2011
4. Walboomers, J.M., M.V. Jacobs, M.M. Manos, F.X. Bosch, J.A. Kummer, K.V. Shah, P.J. Snijders, J. Peto, C.J. Meijer and N. Munoz., Human papillomavirus is a necessary cause of invasive cervical cancer worldwide. *Journal of Pathology*, 1999, 189(1), p.12-19.
5. Schiffman, M., Castle P.E, Jeronimo J, Rodriguez AC, Wacholder S., Human papillomavirus and cervical cancer. *Lancet*, 2007, 370(9590), p.890-907.
6. WHO. Report of the Consultation on Human Papillomavirus vaccines. WHO/IVB/05.16, WHO Immunization, Vaccines and Biologicals, Geneva. Available at www.who.int/vaccines-documents/ 2005
7. CDC. Male latex condoms and STDs fact sheet for Public Health Personnel,2001. Available at
8. Thomas J.O., Herrero, R., Omigbodun, A.A., Ojemakinde, K., Ajayi, I.O., Fawole, A., Oladebo, O., Smith, J.S., Arslan, A., Munoz, N., Snijders, P.J., Meijer, C.J, Franceschi, S. Prevalence of papillomavirus infection in women in Ibadan, Nigeria: a population-based study. *British Journal Cancer*,(2004, 90,p 638-45.
9. Vaccarella, S., Herrero, R., Dai, M., Snijders, P. J., Meijer, C. J., Thomas, J. O., Hoang Anh, P. T., Ferreccio, C., Matos, E., Posso, H., De Sanjose, S., Shin, H. R., Sukvirach, S., Lazcano-Ponce, E., Ronco, G., Rajkumar, R., Qiao, Y. L., Munoz, N. & Franceschi, S. Reproductive factors, oral contraceptive use, and human papillomavirus infection: pooled analysis of the IARC HPV prevalence surveys. *Cancer Epidemiology Biomarkers Prevention*, 2006, 15, p2148-2153.
10. Clifford, G.M., Gallus , Herrero R, Munoz N, Snijders PJ, Vaccarella S, Anh PT, Ferreccio C, Hieu NT, Matos E, Molano M, Rajkumar R, Ronco G, de Sanjose S, Shin HR, Sukvirach S, Thomas JO, Tunsakul S, Meijer CJ, Franceschi S., Worldwide distribution of human papillomavirus types in cytologically normal women in the International Agency for Research on Cancer HPV prevalence surveys: a pooled analysis. *Lancet*, 2005, 366(9490), p.991-8.
11. Munoz, N., Castellsague, X., De Gonzalez, A. B. & Gissmann, LChapter 1: HPV in the etiology of human cancer. *Vaccine*, 2006, 24S3, S1-S10.
12. Schnatz, P. F., Markelova, N. V., Holmes, D., Mandavilli, S. R. & O'sullivan, D. M. The prevalence of cervical HPV and cytological abnormalities in association with reproductive factors of rural Nigerian women. *J Womens Health* , 2008, 17,p 279-85.
13. Abdul, MA, Mohammed A, Mayun A, Shittu SO., Non-Squamous cell carcinoma of the cervix in Zaria, Northern Nigeria: A Clinico-Pathological Analysis. *Annals of African Medicine*, 2006, 5 (3), p 118-121.
14. WHO. National Cancer Control Programmes; policies and managerial guidelines, 2nd edition. Available at 2002 [Accessed 3 March 2008]

Author Information

Abimbola Omolara Kolawole

Department Of Obstetrics And Gynaecology, Ahmadu Bello University Teaching Hospital