Editorial Review

Society of obstetrics and gynecology of Nigeria – Clinical practice guidelines: Guidelines for the prevention of cervical cancer

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ABSTRACT

Clinical practice guidelines have been developed by professional societies globally. Each guideline although based on published scientific evidence reflected each country's socioeconomic peculiarities and unique medical environment. The Society of Obstetrics and Gynaecology of Nigerian has published guidelines in other clinical areas; however, this is the first edition of practice guidelines for the prevention of cervical cancer. The Guidelines Committee was established in 2015 and decided to develop the first edition of this guideline following Delphi pool conducted among members which selected cervical cancer prevention as the subject that guideline is urgently needed. These guidelines cover strategies for cervical cancer prevention, screening, and management of test results. The committee developed the draft guideline during a 2-day workshop with technical input from Cochrane Nigeria and Dr. Chris Maske, Lancet Laboratories, South Africa. The recommendations for each specific area were developed by the consensus, and they are summarized here, along with the details. The objective of these practice guidelines is to establish standard policies on issues in clinical practice related to the prevention of cervical cancer.

Key words: Cervical cancer; guideline; management; prevention; screening; Society of Obstetrics and Gynecology of Nigerian.

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Introduction

The cancer of the uterine cervix is the second most common cancer in Nigerian women.[1-3] In 2012, Nigeria recorded 14,089 new cervical cancer cases and 8240 deaths.[3] Most of the cases were squamous cell carcinoma followed by adenocarcinomas.

Human papillomavirus (HPV) is the main etiological agent for the development of cervical cancer, with HPV serotypes 16 and 18 accounting for more than 70% of cases.[4-6] HPV is also responsible for an important fraction of other anogenital, head-and-neck cancer.

Cervical cancer is preventable through the use of HPV vaccine and curable if diagnosed early. Unfortunately, the majority of the cases in Nigeria present at late stages 3 and 4, when the disease is only amenable to radiotherapy. The inadequate radiotherapy facilities in the country compound the late presentation giving the women almost no chance at survival.

Prevention and treatment of cervical cancer is crippled by lack of awareness and knowledge of the disease, suboptimal public investment and competing health needs, and so on. There is no adequate central database for cervical cancer in Nigeria. There is no organized national screening program for cervical cancer, and the National Health Insurance Scheme has limited coverage for cancer treatment. The few existing cervical cancer screening programs are opportunistic and are based on Pap smear with its technological and human resource challenge and visual inspection with acetic or Lugol's iodine (VIA/VILI) with its challenge of low-test characteristics.

The ideal strategy for cervical cancer prevention and treatment in Nigeria should have the potential to prevent HPV infection, overcome the limitations of existing screening tools, and identify cases early. HPV vaccination of young girls and HPV-based cervical cancer screening methods has the potential to address these gaps.

Globally, high-risk HPV (hrHPV) has been detected in 96.6% of patients with invasive cervical cancer. Testing for hrHPV, therefore, has a key role in cervical cancer screening. HPV infection can be prevented by the use of HPV vaccines. There are three types of vaccines currently available. Two of the three bivalent HPV vaccines (HPV16/18) and quadrivalent HPV vaccine (HPV6/11/16/18) are licensed for use in Nigeria. The nonavalent HPV vaccine (HPV6/11/16/18/31/33/45/52/58) is not yet licensed for use in Nigeria.

Primary Prevention

In Nigeria, cervical cancer screening is opportunistic and inefficient in many parts of the country where the appropriate infrastructure is missing. Therefore, avoiding HPV infection should be the mainstay of cervical cancer prevention using the strategies of health education and vaccination for all women up to the age of 26 years.

Target population: The general population.

The specific interventions for primary prevention of cervical cancer include the following:

1. Health education: Health education and counseling for policymakers, parents, guardians, young girls/boys and women/men to practice safe sex, and delayed sexual debut and benefits of HPV vaccination
2. Use of prophylactic vaccination against HPV: The three HPV vaccines that offer protection against HPV types 16 and 18 (the two most common strains in cervical cancer) which account for about 70% of cervical cancer are available. While the bivalent offers protection against HPV 16 and 18, the quadrivalent and nonavalent offer protection against HPV 6, 11, 16, 18 and HPV 6, 11, 16,18, 31, 33, 45, 52, and 58, respectively. It is estimated that nonavalent vaccine could prevent 87% of cervical cancers globally in women who are naïve to HPV infection. As the current vaccines cannot offer full protection, cervical cancer screening is still very relevant even among vaccinated individuals

   These prophylactic vaccines work best for young girls before they are exposed to HPV infection through sexual intercourse and should be the target population for HPV vaccination. The World Health Organization recommends the primary target population to be girls within the age range of 9 or 10 years to 13 years. It further recommends a two-dose schedule with a 6-month interval between the doses for females younger than 15 years because available evidence has shown that antibody response to two doses in 9–14 years old girls is as good as a three-dose course. The anti-HPV immune responses for all nine types in girls and boys 9–14 years of age who received two doses are the same as in young women 16–26 years of age who received three doses schedule.

Recommendation

- Girls age 9–15 years should be given a two-dose regime schedule with a 6-month interval between the doses (0 and 6 months)
- Women age 16–26 years can be given a three-dose regime (0, 1, and 6 months or 0, 2, and 6 months)
- HPV vaccine should not be given to pregnant women
- Cervical cancer screening is still necessary after HPV vaccination
- Booster dose is not recommended.

Secondary Prevention

The current available HPV vaccines provide only partial protection against cervical cancer; Vaccinated women should still undergo screening. As the impact of HPV vaccines on cervical cancer will take a while to be observed in the country considering that it is an infancy level, secondary prevention by cervical cancer screening will still remain a key prevention strategy in the foreseeable future.

The primary objective of secondary prevention of cervical cancer is the accurate detection and timely treatment of precancerous lesions. Cytology, visual inspection, and HPV testing are three screening strategies for cervical cancer screening. HPV testing has the highest sensitivity.

This guideline recognizes the following limitations associated with cytology-based screening program:

- Shortage of cytopathologists
- Prolonged turnaround time
- Multiple visits
- Loss to follow-up.

The limitations of VIA/VILI include the following:

- High subjectivity
- High false positivity
- Unnecessary treatment.

HPV testing, which is more sensitive than the cytology-based screening test, can be introduced without cytopathologist having the potential to bridge resource gaps.

Target population for screening: the target population includes all women between 25 and 65 years of age. Cervical cancer rarely occurs in women below 25 years of age in our environment and the high proportion of cytological abnormalities that regress spontaneously below this age; screening before this age is less cost-effective and could result in unnecessary interventions. However, women below 25 years of age and at high risk for cervical cancer may be screened after assessment by a physician.

Although cervical cancer screening has not usually been offered during pregnancy, however, in our environment, it may be the only opportunity and it should be offered. Women who have hysterectomy with removal of cervix for benign diseases and without a history of cervical dysplasia can discontinue screening.

Methods of screening

The guideline recommends that HPV testing should be adopted as the primary screening strategy [Figure 1].

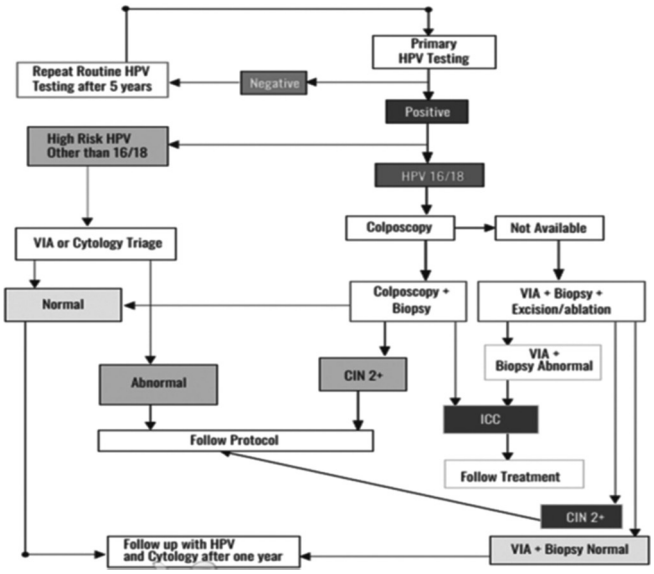

Figure 1: Management of women with high-risk human papillomavirus test result

Where HPV testing is not available, alternative screening methods include VIA/VILI [Figure 2] and cytology [Figure 3].

HPV testing should only target hrHPV. Testing for low-risk HPV types has no clinical role in cervical cancer screening. As the performance characteristics vary among these HPV tests, only analytically and clinically validated HPV tests should be used. Laboratory standard operating procedures and quality assurance programs should be in place for use of any HPV testing procedures.

Treatment of precancerous cervical lesion

Excisional and ablative methods are available for treatment of precancerous cervical lesion. Excisional methods have the added advantage of tissue preservation for histology. This guideline recommends that excisional methods are the preferred option.

Recommendation for secondary prevention

- Screening should start at 25 years of age
- Women <25 years of age at high risk of developing cervical cancer as determined by a physician
- A 5-year screening interval is recommended after a negative HPV test
- Excisional method is the preferred option
- Women treated because of positive result and tested negative during follow-up should revert to the initial 5-year HPV testing interval
- Routine HPV testing should be stopped at the age of 60 years for patients who have been on the routine or have had prior HPV tests, otherwise below 65 years who had not previously tested should undergo testing

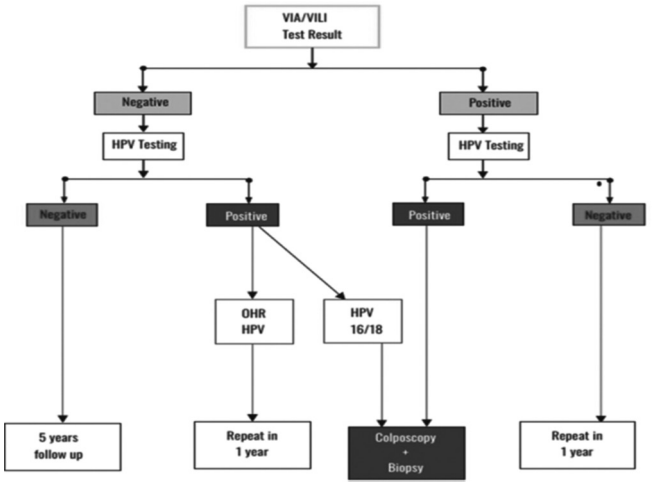

Figure 2: Management of women presenting with and visual inspection with acetic or Lugol's iodine result

- Management of the result of HPV testing should follow the algorithm in Figure 1
- The finding of HPV 16 and 18 in HPV testing requires immediate colposcopy. However, if colposcopy is not available, VIA or cytology, and biopsy are recommended
- The finding of hrHPV serotypes other than HPV 16 and 18, VIA, or cytology is recommended
- Colposcopy is indicated for women with hrHPV-positive test and ASCUS-H cytology result
- Women presenting with ASCUS cytology and hrHPV-negative can be followed up at 1 year
- Women presenting with negative cytology at first screening should be offered HPV testing in 1 year
- A 5-year screening interval is recommended after a negative HPV testing and negative cytology
- HPV testing should be offered during pregnancy.

Special consideration

1. Women starting with Pap smear
   a. If normal/LSIL, offer HPV testing in 1 year
   b. If positive for ASCUS-H/HSIL, perform colposcopy and biopsy
2. Women starting with VIA/VILI
   a. If negative, offer HPV testing in 1 year
   b. If positive, offer immediate HPV testing and manage as per protocol
3. Women living with HIV infection
   HIV-positive women are at a higher risk of persistent HPV infection, rapid progression of precancerous lesion to invasive cervical cancer. After a negative HPV testing, it can be repeated 3 yearly.

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Conflicts of interest

There are no conflicts of interest.

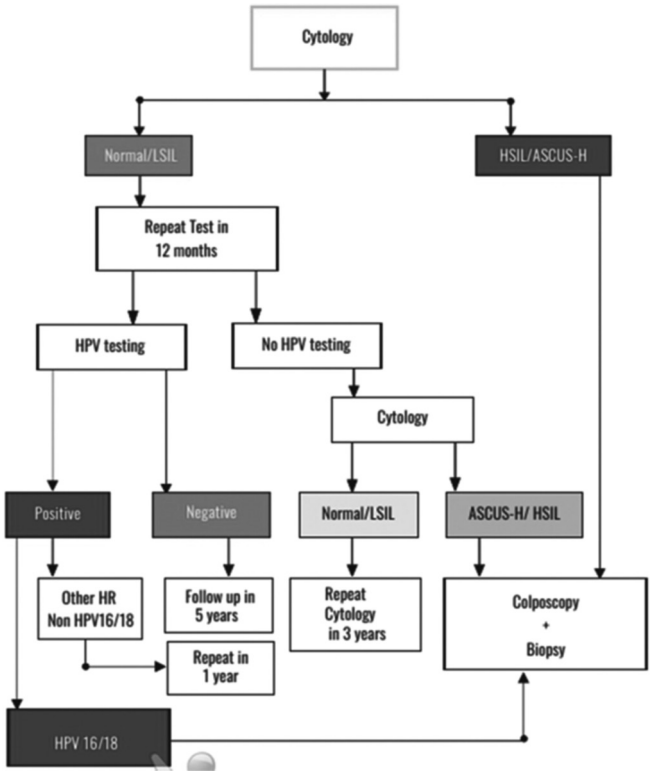

Figure 3: Management of women with cytology test result

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