



One-day Symposium on
HPV Vaccine and Cervical Cancer Prevention
5th July, 2014 | Mayfair Gangtok, Sikkim

SYMPOSIUM REPORT

A One-day Symposium on “**HPV Vaccine and Cervical Cancer Prevention**” for health care experts and policy makers from Northeastern (NE) states was held at Mayfair Gangtok, Sikkim on July 5, 2014. It was attended by representatives from the states of Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and several high-ranking healthcare officials from Govt. of Sikkim. The meeting was organized under the aegis of Cancer Foundation of India (CFI), Kolkata.

Welcoming the delegates, Prof Maqsood Siddiqi, Chairman of CFI, acknowledged that the main objective of the meeting was to recognize the current status of methods and practices of cervical screening and to review the role of HPV vaccination as an important strategy to prevent cervical cancer in the country. He also expressed confidence that the meeting will provide an opportunity to the distinguished health policy makers to interact with reputed medical experts in the subject having vast hands-on experience in the primary (using HPV vaccine) as well as secondary prevention of cervical cancer. He hoped that the meeting will give an impetus to cervical cancer prevention initiatives in North East India.

The meeting was formally inaugurated by Dr. K. Bhandari, DG cum Secretary Department of Health Care, Human Services and Family Welfare, Govt. of Sikkim who emphasized the need of cervical cancer prevention programmes in the NE states in view of the rising incidence of the disease. He also referred to the CATCH programme in the state where cervical screening has been already included. He wished success to the meeting and hoped that its outcome will pave way for intensification of cervical cancer prevention programmes in NE states.

The first scientific talk that was originally scheduled to be given by Dr. P.S.Basu of CNCI, Kolkata, was delivered by **Prof. Neerja Bhatla**, Department of Gynecology, AIIMS, New Delhi, on his behalf, as Dr. Basu could not attend the meeting due to a last minute exigency. The lecture was chaired by **Dr. Ravi Mehrotra**, Director, Institute of Cytology & Preventive Oncology (ICMR), Noida. Prof. Bhatla in her talk on **“Prevention of Cervical cancer –The role of HPV Vaccine”**, laid the foundation of day’s agenda by discussing the global and national burden of cervical cancer, the natural history of cervical carcinogenesis and the methods employed to detect pre-cancerous lesions of the disease. She dealt in detail the importance of cervical cancer screening and its role in reducing incidence and mortality of disease. While discussing the national guidelines for screening, she also described the barriers to the success of screening in India, namely – lack of manpower, infrastructure, funds and awareness among women. In the later part of her talk, she covered the advent of prophylactic HPV vaccine, its mechanism of action and presented data to support the preeminence of HPV vaccination as a method of choice for primary prevention of cervical cancer prevention in the country. She concluded her talk by advising that the major components of a successful cervical cancer prevention programme should include (a) education of women, providers and community, (b) prevention of HPV infection where possible through HPV vaccine, (c) ensuring women’s access to screening linked to treatment, and (d) strengthening of health care system to make disease prevention sustainable.

The next talk was given by **Dr. Smita Joshi**, Programme Director, Jahangir Clinical Development Centre, H.C.Jehangir Medical Research Centre, Pune, on **“HPV Vaccine Trials – Results from International Studies”** and chaired by **Prof. Maqsood Siddiqi** of CFI, Kolkata. Dr. Joshi began with the background information on the HPV vaccine, its production using DNA recombinant technology and the proposed mechanism of protection it provides from infection. She followed it up with a detailed description of the results from the well known FUTURE I, FUTURE II, PATRICIA and Costa Rica trials on the efficacy and safety of quadrivalent and bivalent HPV vaccines – the immune

response results of these vaccines and the immune bridging studies between different age groups of girls and women. She also discussed the studies on quadrivalent vaccine which showed its efficacy in women aged 24-45 yrs who were not infected with relevant HPV types at enrolment. She apprised the audience with Costa Rica trials and those in Canada and Germany which showed HPV vaccine efficacy of fewer than 3 doses by demonstrating antibody response in 2 dose comparable to 3 dose vaccine up to 4 years. She also talked of SAGE (WHO) recommendations that 2 dose vaccine at an interval of 6 months can be given to girls below 15 yrs, while 3-dose regimen be continued in cases of girls above 15 yrs and in immune-compromised girls. Dr. Joshi presented results of HPV vaccine on HIV infected girls showing that HPV vaccine is safe and immunogenic in such cases. A recent report from US National Health and Nutrition Survey was cited showing a drop in prevalence of HPV infection among girls of 14-19 yrs of age from 56 % in 2003-06 to 5.1 % in 2007-10. She validated her support for HPV vaccination by referring to the results from long-term follow up studies of about 10 yrs showing that antibody titre against HPV 16 and 18 VLP remained several fold higher above natural infection level in vaccinated individuals. Dr. Joshi concluded her talk by stating that 217,786 girls have received vaccination in 14 countries under 21 school and health-clinic-based programmes under Gardasil Access scheme between 2009 and 2013.

In the following Lecture **Prof. Neerja Bhatla** of AIIMS, New Delhi discussed the results from Indian studies on vaccines entitled **‘HPV Vaccines: Evidence from Clinical Studies in India’**. **Prof. G.K. Rath**, AIIMS and Chief, BR Ambedkar International Rotary Cancer Hospital, New Delhi, was in Chair. Prof. Bhatla made a comprehensive review of HPV infection epidemiology and type distribution in India. Presenting results from her own research group and collaborators, she emphasized that 84.1 % of cervical cancers can be prevented through HPV vaccination in India as against commonly believed estimate of only 70%. She presented results from a multi-centric study on bivalent vaccine among healthy Indian women, showing good acceptance and compliance,

safety and immunogenicity. Prof. Bhatla also described the results from a large demonstration project (2009-2010; 24,000 girls) in Khammam district of Andhra Pradesh and Vadodra district in Gujarat on girls aged 10-13 yrs showing high 3-dose compliance (89.9 and 78.1 % respectively) and positive acceptance of HPV vaccination by parents of girls with the understanding that the vaccine protects from cervical cancer. Non-acceptance was mainly for the lack of education about the programme. Preliminary results from another major multi-centric trial of HPV vaccine in India (20,000 girls, age 10-18 yrs), the 2 dose-vs-3 dose trial by IARC (WHO) on quadrivalent vaccine were also discussed in detail. Despite suspension of the project mid-way due to ICMR's order, early results from the trial evidently show that all doses are immunogenic and levels after 36 months are several-fold higher than natural infection. The frequency of HPV type 16/18 in 3 dose vaccinated girls was 0.8 % compared to 2.7 % in unvaccinated girls. The study also shows that the 2-dose vaccination regime is comparable to immunogenic response of the 3-dose regime. In conclusion, Prof Bhatla advised that along with secondary prevention, HPV vaccination is an important complimentary strategy for prevention of cervical cancer in the country. To achieve this, however, the misconceptions and misperceptions must be cleared and awareness is improved among common people, she added.

In the post-lunch session, **Dr. R. Sankaranarayanan** of International Agency for Research on Cancer (WHO), Lyon, France, who could not be present due to prior engagements, addressed the meeting through his exclusive Video recorded talk on **“HPV vaccination in Asia, Africa and Latin America – Relevant leads for India”**. Prof. Siddiqi introduced the speaker for the benefit of the audience before the lecture. Dr. Sankar while describing the high incidence and mortality rates of cervical cancer in India expressed his disappointment over the laid-back approach towards its prevention strategy in the country. He articulated his view by showing data where some of the small countries in Africa, Asia and Latin America have initiated national programmes of screening and HPV vaccination for prevention of the disease. He outlined the risk

factors for cervical cancer and highlighted the primary prevention through HPV vaccination. He described in detail the 62 countries where HPV vaccination has been included in their national immunization agenda. Dr. Sankar was categorical in asking as to why India is not stepping ahead with nation-wide primary and secondary prevention programme of cervical cancer when Asian and African countries like Bhutan, Malaysia and Ruanda have gone ahead with HPV vaccination and screening successfully since 2009/2010. He described in detail the vaccination programme in Malaysia and expressed appreciation of the firm and pragmatic stand taken by its government despite anti-vaccine movements similar to what we have in India. Dr. Sankar presented results from IARC multi-centric trial on HPV vaccine in India (2 dose-vs-3 dose trial since 2009) which shows highly promising results with regard to safety, immunogenicity and efficacy of 2-dose being comparable to 3-dose regime. On the basis of results from various trials globally where similar results were obtained by default, 7 countries have included 2-dose regime in their national immunization agenda. He referred to the Australian vaccination programme since 2007 which is already showing decline in cervical cancer incidence. Finally, he advised that in view of the available international and national evidence, it would be highly rational and pragmatic for India to start HPV vaccination for girls of 9-13 yrs of age along with population-based screening using HPV detection method for women above 35 yrs in its cervical cancer prevention programme.

The last scientific session was the Panel Discussion on **“Relevance of HPV vaccine in India”** moderated by **Prof. Neerja Bhatla** and the panel comprised of **Prof. G.K. Rath** of AIIMS, New Delhi and **Prof. Ravi Mehrotra**, ICPO (ICMR), Noida, **Dr. Smita Joshi**, JCDC, Pune, **Dr. Eric Zomawia**, Govt. of Mizoram, Aizawl and **Dr. Yogesh Verma**, Med. Suptt, STNM Hospital, Gangtok. Prof. Bhatla requested each panelist to speak on the following topics and invited comments and questions from the audience. The topics were, Cervical cancer – Magnitude of the problem, trends in cervical cancer incidence, implications for prevention programs in India. **(GKR)**, Methods for cervical cancer

prevention. What are our choices? **(SJ)**, why did screening take so long to set up? Will it ever succeed? **(RM)**, the need for HPV vaccination **(YV)**, what are the presently accepted schedules? **(EZ)**, which age group/s? **(YV)**, what are the expected barriers and do we have solutions? **(EZ)**, Advantages of implementing 2-dose regimes? **(SJ)**, what will be the place of screening after HPV vaccination programs are in place? **(RM)**, which is more cost-effective, screening or vaccination? **(YV)**, which diseases will be prevented by HPV vaccination? **(GKR)** HPV vaccination in males, help or hindrance? **(SJ)**.

The short discourse by each panelist attracted comments from the participants in the meeting and resulted into a stimulating discussion covering a whole range of constructive and positive suggestions on the possibilities of launching cervical cancer prevention programmes in the country and particularly in NE states. While there was a general agreement that sufficient background information is now available on the feasibility of a successful population-based HPV vaccination and screening of women to prevent cervical cancer in the country, suggestions were made by the participants which need to be simultaneously addressed with respect to the logistics of cold chain, challenges of compliance to multi-dose vaccination, socio-cultural barriers for screening of women, appropriate communication material for educating women and more importantly cost-effectiveness of screening and vaccination as a public health measure in India.

The meeting ended with a vote of thanks by Ms. Sutapa Biswas, Executive Director, CFI, Kolkata, who profusely thanked all the participants, governments of NE states for nominating their representatives, the speakers and panelists and Dr. K. Bhandari for attending the meeting despite his busy schedule. Ms. Biswas expressed hope that sooner than later, it will be the governments of NE states taking the lead in launching population-based HPV vaccination in the country. She thanked Destination Holidays, Gurgaon, the travel partners, and the management and staff of Mayfair Gangtok for their utmost cooperation. She also acknowledged the support received from donors and well wishers that made it possible for CFI to hold this meeting.