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Editorial

Influenza vaccination: Some clinical concerns for South Asian practitioner

Influenza virus, an important pathogenic virus causes influenza infection which is an important public health problem. Due to the possibility of the worldwide pandemic, several public health manipulations against influenza are presently implemented. In general, a patient with influenza infection is managed by standard antiviral drug[1], though the prevention is better than correction by treatment. An important primary prevention is influenza vaccination[2]. The influenza vaccine is presently widely used around the world. Many countries already implemented influenza vaccination into national vaccination programme[2]. In South Asia also, the influenza vaccine is available and in use.

Cost and effectiveness of influenza vaccine in South Asia

Cost-effectiveness is an important aspect for any vaccine. The influenza vaccine used in clinical practice is the seasonal influenza vaccine. Seasonal influenza vaccination has been shown to be cost-effective. In a study by Lall *et al*[3], the cost-effectiveness of using influenza vaccination for the patients with chronic obstructive lung disease in developing countries including India was confirmed[3]. The vaccine is normally used for risk groups, not for general population. In general, the vaccine is recommended for the medical personnel, the elderly, the pregnant woman, infant and the patient with some specific diseases (such as cancer, diabetes mellitus and stroke). According to the position paper of Indian Academy of Pediatrics, influenza vaccination was recommended in all children with risk factors[4]. A recent report on the trial in Bangladesh also showed that the influenza vaccination for pregnant women was cost-effective[5].

The coverage of influenza vaccination is low at present in resource-constrained countries[5]. The cost of the vaccine is a big obstacle for implementation of influenza vaccination programme[6]. In a report from India[7], acceptance to influenza vaccine was directly related to the cost. Sundaram *et al*[7] performed a survey and found that 93 per cent of interviewees accepted the vaccination at no cost. Therefore, it is a challenge for the government to manage the cost of vaccine so that it can result in increased cost-effectiveness[6]. The cost of medical management of the patients with infection is high, and thus the investment by government for vaccination appears to be cost-effective[8].

Due to the continuous change of influenza epidemiology, it is necessary to have a regular assessment on the cost-effectiveness of influenza vaccination in different settings. An additional concern on the awareness and preference of the community to the vaccination is necessary. It is apparent that the awareness and preference of the community are additional factors to be considered when one deals with the effectiveness of the influenza vaccination aiming at implementation for general population[9]. In a report from India, recommendation from a physician was proven more important than lowering cost of vaccine in promotion of vaccination acceptance among local target population[10]. How to increase vaccine coverage is an issue that should not be forgotten[11].

Apart from seasonal influenza vaccination, there are some reports regarding the vaccination for atypical influenza. The bird flu is the atypical influenza that is widely discussed for the usefulness of vaccination[12]. In South Asia, the cost-effectiveness of vaccination against bird flu (avian influenza) is an interesting aspect to be assessed[13]. A study from Nepal showed that implementation of vaccination for bird flu strategies was better and more cost-effective than no implementation[14].

Adverse effects of influenza vaccination in South Asia

Though most of the clinical trials reported no adverse effects of influenza vaccine[15,16], there were

sporadic reports[17]. In general, the risk versus benefit analysis for influenza vaccination is an important issue to be addressed before deciding on the implementation of the vaccination[17]. A recent report from India showed that there was no significant serious complication of influenza vaccination for the pregnant woman[18]. The confirmation of safety of vaccination can help increase vaccine trust among general population, which implies increased acceptance and coverage rate[19]. Not only adverse effects but also other possible unwanted events due to the vaccination should be prevented. The quality control of the vaccine production, vaccine use in clinical setting and post-vaccination surveillance are important. Medical practitioners should continuously improve knowledge regarding influenza and vaccination. The South Asian recommendations for vaccination against seasonal influenza need to be followed[20].

Conclusion

Influenza is still an important public health problem in several areas of the world including South Asia. The implementation of influenza vaccine is a big challenge. It is necessary to consider for cost-effectiveness and risk for influenza vaccination. In South Asia, the advantage of influenza vaccine for specific risk groups has been confirmed. The adverse effects due to influenza vaccine have also been observed. As a disease with rapid change in its nature and epidemiology, the continuous research is necessary. Studies on the effectiveness, risk and benefit of influenza vaccination are required. Continuous search should be done to develop new effective vaccine against influenza for combating the disease.

***Conflicts of Interest*:** None.

Viroj Wiwanitkit[1,2,3]
[1]Department of Biological Science, Joseph Ayo Babalola University, Ikeji-Arakeji, Nigeria,
[2]Department of Community Medicine, Dr. D.Y. Patil University, Pune 416 209, India &
[3]Department of Medical Science, Faculty of Medicine, University of Nis, Nis, Serbia
wviroj@yahoo.com

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