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RESEARCH ARTICLE

AWARENESS OF AVAILABILITY AND BENEFITS FOR INFLUENZA VACCINATION

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ABSTRACT

Background: Influenza virus causes outbreak of influenza which causes sickness and kills thousands of people each year, also may cause outbreaks of devastating worldwide epidemics. There are three human pathogens; Influenza A that causes worldwide epidemic, Influenza B virus that causes influenza and Influenza C virus causes mild respiratory tract infections. The lack of awareness among people or medical professionals, shortage of sufficient epidemiological information or due to inaccessibility of current vaccine of general population for prevention of flu virus and related illness. In this study we aimed to analyze level of awareness regarding influenza vaccination along with benefits among general population of various age groups.

Method: We performed a descriptive survey-based study to analyze awareness among general population in Karachi about availability and accessibility of flu vaccine and its cost effectiveness. There were 100 participants were divided into four age group who were asked to fill the questioner regarding the awareness of influenza vaccine. Also if they were vaccinated and its effectiveness.

Results: Out of 100 the persons in general population were aware about the vaccine availability and benefits in population of Karachi. The episode of influenza and complication even after vaccination in elderly patients, medical practitioners and paramedics.

Conclusion: We concluded that even though vaccine is available yet, there is a dire need of awareness among general population as majority of the people didn't know about its benefits.

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INTRODUCTION

Influenza epidemics are a cause of global mortality and morbidity, as well as significant economic costs, annually. The Centers for Disease Control (CDC)and Prevention estimates that a mean of 200,000 excess hospitalizations occur and 36,000 Americans die every year because of influenza and its complications; therefore, influenza kills more Americans than does any other vaccine-preventable disease (Poland, 2009). The study by Nichol *et al*. (Fiore *et al*., 2008) provides additional data on the effectiveness of influenza vaccine in preventing ILI in healthy working adults and on a variety of related significant outcomes during a season when circulating wild strains and vaccine strains were well-matched and ILI was widespread. ILIs (influenza like associate illness) were common among our study participants, accounting for a large portion of illness, work loss, and impaired work performance during the influenza season. Vaccination was associated with substantial health and productivity benefits. Vaccine delivery should be improved for this high-priority group (Nichol *et al*., 2009; Costantino and Vitale, 2016) Influenza is associated with fever, myalgia, cough, respiratory symptoms and muscle pain.

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Recovery is usually within a week in healthy individuals (Treanor, 2016). This may cause serious bacterial super infection such as respiratory tract infections (pneumonia), or cause super infections by Staphylococcus causing toxic shock syndrome or even myocarditis in high risk patients. The aim of this study was to perform such studies on the population of Karachi to determine the knowledge and effectiveness of influenza vaccine.

MATERIALS AND METHDOS

A survey was done on general population regarding the frequency of vaccination and the knowledge and benefits of given vaccine in different age groups. A questioner regarding the awareness of influenza vaccine, vaccination and post vaccination benefits/episodes was filled in by parents of infants, age groups from 15-20 years, 18-25 years and 60 years onwards.

RESULTS

This study was done on four age groups, infants (6-18 months), young people (15 – 20 years), adults (21-25 years) and above 60 years in Karachi. It is seen that vaccine is available and in infants influenza vaccine is being prescribed as routine in private hospitals.

Table 1. Awareness, contagion and vaccine of human influenza virus

No of Participants N=100	Age groups (years)	Awareness	Vaccinated (%)	Post Vaccination Episode
N= 20	6months- 18 months	Parents awareness A= 20 NA= -	Vaccinated = 20 (100%)	Nil
N=20	15-20	A=17 NA=3	Vaccinated =7 (35%)	3
N=40	21-25	A=38 NA=12	Vaccinated =21 (52%)	2
N=20	60 onwards	A=2 NA=16	Vaccinated = 6(30%)	Nil

A: Aware NA: Not Aware

But the vaccination in other age groups specially over 60 years is neither being done regularly and the awareness is also less (52%). Although very low incidence of post vaccination episodes seen. (Table.1)

DISCUSSION

Influenza spreads in winter months spreads rapidly due to low humidity and low temperatures. Influenza A and influenza B. The pandemic of influenza has on its surface haemaglutinin (HA) and neuraminidase (NA) are cause of serious influenza pandemics (Treanor, 2016). This study shows very low awareness of availability and benefits of influenza vaccination in general population and hospital staff. Influenza vaccine efficacy was 65% against any strain, 78% against matched strains and 55% against not-matched strains. Both live-attenuated and inactivated vaccines showed similar levels of protection against not-matched strains (60% and 55%, respectively). Live-attenuated vaccines performed better than inactivated vaccines in children (80% versus 48%), whereas inactivated vaccines performed better than live-attenuated vaccines in adults (59% versus 39%). There was a large difference (20%) in efficacy against influenza A (69%) and influenza B (49%) types for not-matched strains. The vaccine efficacy were highest when based on culture confirmation. (Gross *et al*., 1995) Vaccination at present represents the most effective prevention against influenza and associated complications, antibody response and protection elicited by the vaccine are lower in 65 years of age or older than among younger adults. (Falsey *et al*., 2009) The high-dose, trivalent, inactivated influenza vaccine (IIV3-HD) contains four times as much hem agglutinin (HA) as is contained in standard dose vaccines. On the basis of its safety profile and superior immunogenicity as compared with a standard-dose vaccine IIV3-HD was licensed for use in the United States in December 2009, with a requirement to show clinical benefit. Study Falsey *et al*. has show the efficacy of IIV3-HD as compared with a standard-dose vaccine for the prevention of influenza illness in adults 65 years of age or older. Among persons 65 years of age or older, IIV3-HD induced significantly higher antibody responses and provided better protection against laboratory-confirmed influenza illness than did IIV3-SD. (Falsey *et al*., 2009) Influenza vaccines can provide moderate protection against influenza episodes, but such protection is greatly reduced or absent in some seasons (Diaz Granados *et al*., 2014) Estimate is consistent with an immunogenicity study that showed that immune responses induced by IIV3-HD in adults 65 years of age or older were similar to those observed with IIV3-SD in younger adults. In elderly patients influenza is not only responsible for complication such as pneumonia but also may lead to chronic heart and lung diseases (Osterhom *et al*., 2012; Nichol *et al*., 1998; Govaert *et al*., 1998) Influenza vaccine just as important as the pneumococcal vaccine. If vaccinated older person gets flu, it is usually a milder. Pneumonia is often a secondary infection after an initial bout of influenza, people who receive this vaccine have less risk of developing pneumonia as a flu complication. Thus older individuals should get vaccinated every year (Talbot and Falsey, 2010).

Conclusion

We concluded that even though vaccine is available yet, there is requirement of awareness among general population as majority of the people are unaware of availability and benefits for vaccination against influenza. Our study shows that majority of elderly patient were unaware influenza vaccine leading to low elderly patients who are vaccinated and younger age group were aware of this vaccine but majority were not vaccinated may be due to lack of awareness of its benefits. Different platforms including both public and private, should be used for awareness of the presence and benefits of influenza vaccination

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