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Research Article

OUTBREAK OF INFLUENZA VIRUS IN MULTAN

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Influenza is considered infectious illness and is caused by influenza virus. The disease is considered seasonal and mostly its outbreak is observed in winter. The influenza virus affects the respiratory system of the person. The common symptoms observed during disease are running nose, headache, body ache, sneezing and fever. Influenza is common in South Punjab Multan during winter season. The winter is very dry and foggy with little rain. The dry cold weather becomes the cause of influenza outbreak.

Methods:

The research study was in Nishtar Hospital Multan from the Period of October 2018 to September 2019. The sample size of the patients was 600 and all patients came with the complain of respiratory problem. For study purpose the diagnostic tests were recommended and among them 250 patients were positive of strain A and strain B of influenza virus.

Conclusion:

It is recommended to get vaccinated before the start of winter so that the influenza outbreak may not affect the daily routine of the people. It helps to reduce the severity and no of attacks of influenza virus. The aim of the study is to analyze the outbreak causes and seasonality in Multan region and also to recommended ways to control the outbreak.

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INTRODUCTION:

Respiratory system when attacked by the influenza virus affects the throat, nose and lungs of the patients. The common name of the influenza is flue and people think that the flue will be recovered by itself. It is not deadly but it can become complex in infants and in senior citizens. People with weak immunity, diabetes, asthma, liver, kidney and heart disease are also considered vulnerable to influenza attacks. The best defense against the flue is considered the vaccination of flue before its outbreak. Discomfort in flue is very common and other symptoms include, fever, runny nose, muscular aches, headache, sometime dry cough, nasal congestion, overall fatigue and low feelings. It is a contagious disease and may affect the healthy person from the day of attack to 5 days but among the patients with low immunity they remain contagious for a week and can spread the flue to other persons. Influenza virus has many strains and the strain even mutate in the patients who have multiple attacks of influenza virus. The human body immune system develops antibodies to fight against the viral diseases naturally and also with the help of vaccination. But if the influenza strain is new to the body the protection system of body is unable to fight it. The most common types of influenza are Type A, Type B and Type C. As it is a contagious disease the mode of transmission is through touch, sneezing, coughing and through contact. Flue can be tested from the sample taken from nose, throat or from sputum. In winter the flue is commonly observed by Type A and its presence remains active in whole winter due to the transfer from one person to other in

cold weather. Vaccination is available in winter and remains effective for one year. It is suggested that before the start of winter you should get vaccinated in order to refrain from flue. Patients with multiple health issues have lower immune system and the flue can become fatal for them. Mortalities were observed in the past due to influenza during outbreak. Timely intervention can help to reduce the deaths among weaker people. Awareness campaign can help the community to reduce the outbreak by properly washing hands and using mask during the flue so that it may not affect the healthy people. The aim of the study is to analyze the causes of flu, seasonality factor and also to identify the vulnerable group in the society to whom it can become fatal.

Research Methodology:

The study was conducted in Multan region in Nishtar Hospital from the period of October 2018 to September 2019. The patients who came with complain of respiratory problem and flue were included in the study. After the physical and clinical examination the patients were suggested laboratory test in order to confirm the strain of bacteria.

RESULTS AND DISCUSSIONS:

The sample size in the study was 600 patients with respiratory problem and from diagnostic tests the 250 patients were positive of influenza virus. From the results of Lab the Type A was observed in 200 patients and Type B was observed in 50 patients. The remaining 350 patients have negative results.

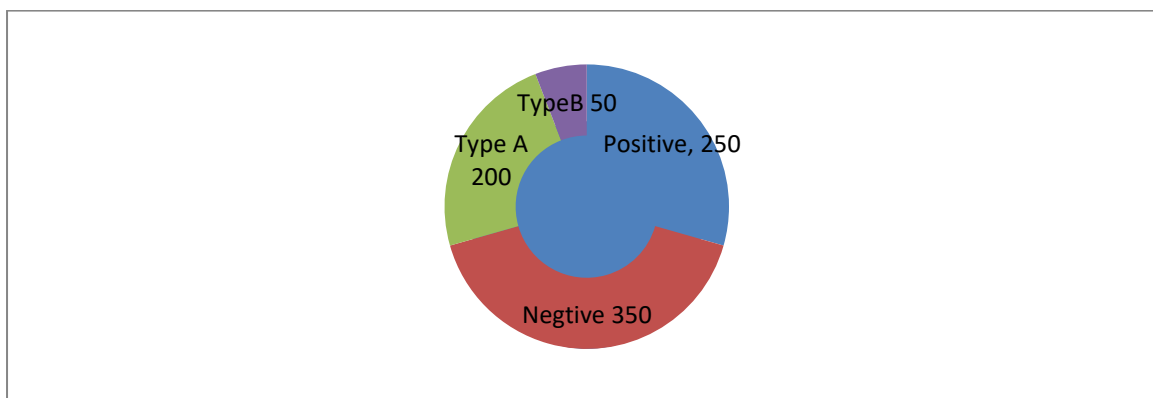


Figure 1

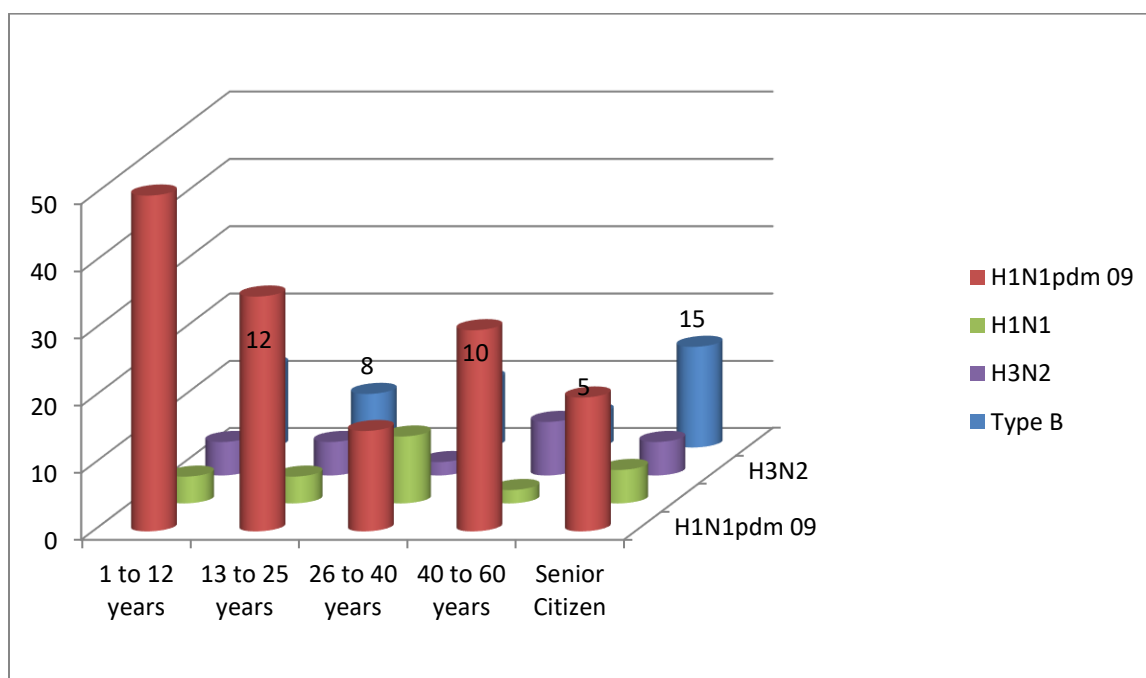
As discussed early the influenza virus is contagious and people from all age group may be affected but the most vulnerable group is considered older people and children including infants.

Table 1

Age	H1N1	H1N1pdm09	H3N2	Type B
1 to 12 years	4	50	5	12
13 to 25 years	4	35	5	8
26 to 40 years	10	15	2	10
40 to 60 years	2	30	8	5
Senior Citizen	5	20	5	15

The influenza virus is contagious in nature and when it appears in the community it rapidly multiplies the patients due to contacts, sneezing, coughing and from hand shaking. School and college children are affected most. Infants and older people get the viral attack many times during winter season. The older people and also youngsters should wear mask in

outbreak time so that they may not caught flu, and also the person who caught flue should wear mask so that they may not become the source of spreading flue in the area. Following graph shows the distribution of flue according to age and strain of the influenza virus



The sign and symptoms which were present in the patients who were participants of the study were watery eyes, runny nose, redness of nose and eyes,

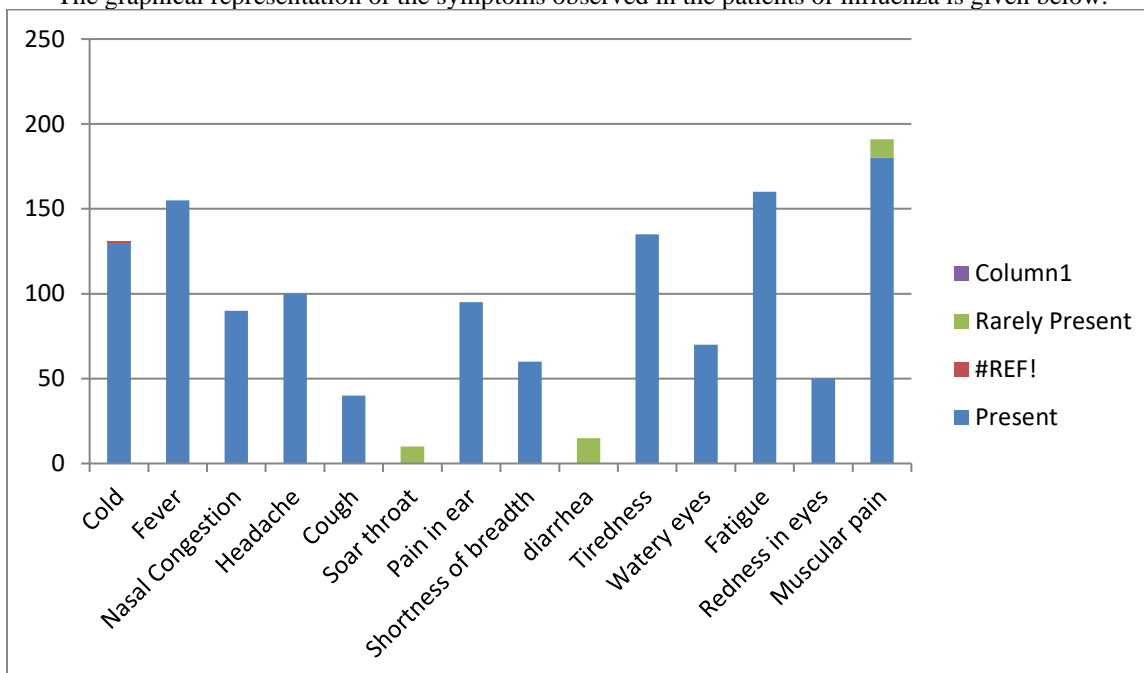
sneezing, muscular ache, fatigue, nasal congestion, chills, earache, fever and headache.

Table 2

Symptoms	Present	Rarely present
Cold	130	
Fever	155	
Nasal Congestion	90	
Headache	100	
Cough	40	
Soar throat	120	
Pain in ear	95	
Shortness of breadth	60	
diarrhea		15

Tiredness	135	
Watery eyes	70	
Fatigue	160	
Redness in eyes	50	
Muscular pain	180	

The graphical representation of the symptoms observed in the patients of influenza is given below.



The influenza is mostly confused with cold which is common in winter also. The flue and cold are actually different although sharing few common symptoms which are presented in the following table 3

Table 3

Symptoms	Influenza Flue	Normal Cold
Symptom appearance	At once	With passage of time
Chills and fever observed	From 2 to 6 days	sometime
Body pain	Present sometime	Always
tiredness	Observed if many cases	common
Sneezing	Common	Sometime
Nasal congestion	Common	May be
Sore throat	Present	May be

H1N1pdm09 positive patients were high in number and also the strain causes soar throat and high fever in the patients. Diarrhea is rarely observed in the patients of influenza and it was observed only in the infants who have weak immune system. Type A which is very common in winter is H1N1pdm09 and it is widely present in Multan region. Type B strain is not common as the rate of mutation of the strain is slow as compared to Type A strain which rapidly mutate itself in patients. In vulnerable group of patients sometime anti viral is suggested in order to

reduce the severity of the disease. Treatment of the influenza virus is rest and enhanced fluid intake. Supplementary medicines for pain and allergy are also suggested in order to reduce the discomfort to patients .Influenza attack remain active for five days and the time period remain contagious in nature.

The diagnostic tests for flue are not common and the treatment is mostly based upon symptoms but when the mortality during outbreak is observed it became necessary to found out the strain of flue prevailing in

the population. H1N1pdm09 strain is commonly known as swine flu it is a mutant kind of strain of Type A. This strain has become the cause of death in many patients in South Punjab in Past. It is the ability of the flu virus to mutate quickly even in the body of host and it become fatal for the people who have multiple health issues, having poor immunity and are from special age group (infants and senior citizens). Government should take the influenza outbreak seriously before it create havoc in the area. Vaccination in the area which are considered at high risk and preventive measured can make the morbidity and mortality of the disease at minimum level.

How to prevent Influenza Spread?

Following are the preventive measured which should be adopted and promoted before and during outbreak of influenza

- Proper washing of hands with sanitizer and soap
- Proper disposal of tissue papers after use
- Taking rest in homes if caught flu
- Using handkerchiefs and tissue papers while sneezing and coughing
- Using mask during the attack and avoiding contact with affected persons
- Vaccination on time can reduce discomfort
- Restriction of public contact may help to avoid spread of flu

Influenza is a common public health issue in Asian Countries due to the cold and humid climate. As the climate is widely changing in Asia therefore, these countries are facing mutating strains of influenza outbreak in their population during winter seasons. H1N1 pdm09 is widely present in Asian countries and also widely observed in Pakistan. Only the preventive measures and awareness programs help to control outbreak.

CONCLUSION:

The vaccination program and education campaign to prevent flue before the start of the winter seasons can help to control the outbreak. WHO has also launched surveillance system to monitor the influenza outbreak and preventive plans to reduce the future outbreaks. Social and print media is playing a critical role in controlling the outbreak of flu by running awareness campaigns and advertisement to get vaccination and take preventive measures to catch the disease.

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