International Journal of Research Studies in Medical and Health Sciences
Volume 4, Issue 3, 2019, PP 17-20
ISSN : 2456-6373

The Evaluation of Seasonal Influenza Vaccination Rates of Patients in Risk Group and Factors Affecting Influenza Vaccination Rate

Senay Ozturk Durmaz[1], Mehmet Celik[2]

[1]Antalya Kepez State Hospital, Department of Infectious Diseases and Clinical Microbiology, Antalya, Turkey
[2]Antalya Kepez State Hospital, Department of Endocrinology and Metabolism, Antalya, Turkey

***Corresponding Author:** Senay Ozturk Durmaz, Antalya Kepez State Hospital, Department of Infectious Diseases and Clinical Microbiology, Antalya, Turkey.*

ABSTRACT

Objective: *To determine the rates of vaccination and increase awareness of seasonal influenza vaccines for patients with high risk of complications due to influenza.*

Method: *The most effective way of protection against influenza is vaccination. The influenza vaccine significantly reduces hospitalizations and mortality rates during the seasonal outbreak. The study included 150 patients who were admitted to the infectious diseases and endocrinology outpatient clinic within a 5-month period and were included in the risk group for seasonal influenza. Income levels, education levels, demographic data and disease status of the patients were questioned. If they were not vaccinated, questions were asked to determine the reasons for this. The responses were statistically analyzed.*

Results: *The ages of the patients ranged from 24 to 88 and the mean age was 62.3 ± 15.6 years. Of the patients included in the study, 80 were females (53.3%) and 70 (46.7%) were males. 116 of them were primary school graduates. Two out of 150 patients (30.7%) had seasonal influenza vaccination in the last year. 104 (69.3%) were not vaccinated. Most patients (47%) had an income equal to or lower than their income level (39%).135 patients had an additional chronic disease. 112 were diabetic, 15 were chronic obstructive pulmonary disease (COPD), 1 was chronic renal failure (CRF), 3 were malignancy, 1 was sarcoidosis and 3 were HIV (+). The number of patients over 65 years of age were 60 (40%).*

Conclusion: *Our rate of vaccination in patients with seasonal influenza was less than the recommended targets of the World Health Organization. In order to inform patients about vaccination and to increase awareness by preventing information pollution in media organizations, we think that joint projects with the Ministry of Health may increase the rates of vaccination.*

Keywords: *Influenza Vaccination, Diabetes Mellitus, mortality*

INTRODUCTION

Influenza plays an important role in the increase of mortality due to pneumonia seen in winter. Among the causes of death in adults over 65 years of age, the rate of influenza-related infections is around 90%, and influenza-related deaths in individuals over 85 years of age are reported to be 16 times higher than in 65-69 years of age. The duration of influenza symptoms is longer and the severity of the disease is higher among HIV-infected individuals (1,2).Respiratory failure due to influenza infection is 10-30 times more common in elderly than in young people (3,4). The influenza vaccine significantly reduces hospitalizations and mortality rates during the seasonal outbreak. In the General Assembly of the World Health Organization (WHO) in 2003, it was decided to provide the conditions and conditions related to the influenza vaccination of all the elderly (5).The Advisory Commitee on Immunization Practices (ACIP) recommends the annual influenza vaccine in some special groups (6). Groups with high risk of serious medical complications due to influenza in adult patients; 65 years of age, patients with chronic lung and heart disease, kidney failure, chronic liver failure, metabolic disorders such as diabetes, immunosuppression, health personnel, nursing home workers, those living in the same household as those in the risk group for influenza, pregnants, morbid obese mass index> 40 kg /m²).In patients with diabetes, death due to influenza infections was found to be 2-4

times more than non-diabetic patients (7). This situation can also be prevented by increasing influenza and pneumococcal vaccines in diabetic patients (8,9). In our study, it was aimed to determine the positive, negative thoughts and attitudes that affect the vaccination behavior, and to improve the rate of vaccination with the data obtained.

MATERIALS AND METHODS

Between September 2018 and February 2019, 150 patients who were admitted to the Infectious Diseases and Endocrinology outpatient clinic were included. Health workers and patients under 18 years of age were not included in the study. The patients' age, gender, income status, health insurance, questions about their occupations and whether they have a chronic disease and demographic data were noted. The patients were asked if they had influenza vaccines this year. Patients who had a vaccination for influenza were asked who suggested the vaccine. Patients without influenza vaccination were asked questions about the cause. Statistical data analysis was performed in SPSS program.

RESULTS

The mean age of the patients was 62.3 ± 15.6 years. 80 of them were female (53.3%) and 70 of them (46.7%) were male. Out of 2, they had social security, and 146 patients had gone to the doctor within the last 6 months. Of the patients104 (69.3%) were unvaccinated. Most of the patients (47%) had a lower or lower income level (39%) than their income.135 patients had an additional chronic disease. 112 of the patients were diabetic (12 had diabetes + chronic hepatitis B, 33 had diabetes + over 65 years of age), 15 had chronic obstructive pulmonary disease (COPD) (12 were COPD + over 65 years of age, 3 COPD + Chronic hepatitis B), 1 chronic renal failure (CRF), 3 malignancy, 1 sarcoidosis, 3 HIV (+). The number of patients over 65 years of age was 60 (40%). 33 diabetes mellitus, 3 malignancy patients, 1 CRF, 1 sarcoidosis, 3 HIV (+), 5 advanced age patients had seasonal influenza vaccination during the year. was grafted. When the answers of the patients were evaluated, 76 people believed that they would have flu after the vaccination, 78 of them feared the side effects of the vaccine and 81 of them did not find the vaccine important.

Table1. *Sociodemographic characteristics of the patients*

Variables	Number	Percent(%)
Gender		
Female	80	53,3
Male	70	46,7
Health insurance		
Yes	148	98,7
No	2	1,4
Income status		
Income = expense	71	47,3
Income <expense	59	39,3
Income> expense	20	13,4
Education status		
Primary school	116	77,3
Middle School	7	4,7
High school	20	13,3
University	7	4,7

Table2. *Questions and answers about influenza vaccination to patients*

Variables	Number	Percent (%)
Seasonal influenza vaccine		
Yes	46	30,7
No	104	69,3
Where was the influenza vaccine?		
Family Health Center	42	89,4
At hospital	4	8,5
Private clinic	1	2,1
Who recommended the influenza vaccine?		
I heard from my relatives, friends and neighbors	0	0
Doctors, health care workers	44	93,6
TV programs, newspapers, media	3	6,4

Table3. *Additional diseases and vaccination rates of patients*

Additional disease	Vaccine (+)
Diabetes (n = 112)	33(%29,4)
Malignancy (n = 3)	3(%100)
COPD (n = 15)	0
CRF (n = 1)	1(%100)
Sarcoidosis (n = 1)	1(%100)
HIV (+) (n = 3)	3(%100)
65 years old with no additional illness (n: 15)	5(%33,3)

Table4. *Reasons for not being vaccinated*

Variables	Yes		No	
	Number	Percent	Number	Percent
To be expensive	35	34,6	66	65,4
Lack of time	29	38,7	72	71,3
Not knowing where to reach	53	52,5	48	47,5
To believe that you will have flu after vaccination	76	75,3	25	24,7
Being afraid of side effects of the vaccine	78	77,2	23	22,8
Not thinking that the vaccine is important	81	80,2	20	19,8
Ignore the flu disease	75	76,2	24	23,8

No significant relationship was found between the presence of sex, income status, educational status and presence of vaccination.

DISCUSSION

Influenza is important in individuals over the age of 65 and in patients with chronic diseases (diabetic, chronic lung disease, chronic liver disease, HIV (+) patients), because of higher morbidity and mortality rates. Seasonal influenza vaccine is the most effective method of protection from influenza. General population and vaccination rates in diabetic patients in Turkey were lower compared to developed countries (10). When the rates of influenza vaccination in the United States in 2012 are examined by age groups, it is seen that there is a vaccination rate up to 67% in older age groups (11). In 2003, the World Health Organization reported that vaccination rates should reach 75% in all countries, especially those with advanced age and critical disease, and that 90% should be reached by the end of 2015.In our study, the rate of vaccination was 30.7%. 89.4% of the patients were vaccinated at the family and community health centers. 93% of the patients had been told by a health worker that they should be vaccinated. The majority of patients were diabetic in 74.6% (n: 112) and the rate of immunization in diabetic patients were 29.4% (n: 33). In a study conducted by Ciftci E. et al in Turkey in 2017, the rate of vaccination in a similarly risky population was reported to be 33.4% (12). In a study by Arslan et al., The rate of vaccination in diabetic patients were found to be 14.6% and they reported that 72% of the patients had information about the vaccine by a health worker. In the same study, the rate of vaccination at the age of 65 years was reported to be 21.4% (13). In a study conducted by Özsu S. et al with 129 patients with COPD, they reported a 37% vaccination rate (14). In a study by Akman M. et al., they were found that the rate of vaccination 26.5% above 65 years of age (15). Influenza vaccination rate was found to be 68% in a study conducted on 642 people over 65 years of age in Spain (16).In our study, influenza vaccination rate was found to be below the values determined in most of the developed countries. 75.3% of the patients believed that they would have flu after the vaccination and 77.2% stated that they did not take the vaccine because they thought it was the side effect of the vaccine. Physicians and media organizations have a great role in eliminating the prejudice and misinformation about this vaccine. Vaccination campaigns should be organized to facilitate the access of the population to the vaccine. In family health centers, physicians should be trained about adult vaccination in the context of preventive medicine and all physicians should be more sensitive about adult vaccination.

CONCLUSION

The rate of vaccination is low, especially in the group where the mortality and morbidity of influenza should be high. In order to increase this rate, it is important to use the media and press more actively, to inform physicians about adult vaccination and to inform their patients about seasonal vaccination and to encourage them to be vaccinated.

REFERENCES

[1] Thompson WW, Shay DK, Weintraub E, Brammer L, Cox N, Anderson LJ, Fukuda K.Mortality associated with influenza and respiratory syncytial virus in the UnitedStates. JAMA. 2003;289(2):179-86.

[2] Fine AD, Bridges CB, De Guzman AM, Glover L, Zeller B, Wong SJ, Baker I,Regnery H, Fukuda K. Influenza A among patients with human immunodeficiencyvirus: an outbreak of infection at a residential facility in New York City. ClinInfect Dis. 2001 ;32(12):1784-91

[3] Centers for Disease Control and Prevention. In:Atkinson W,Hamborsky J,Stanton A,Wolfe C,editors.Epidemiology and Prevention of Vaccine-Prevenable Diseases-The Pink Book. Pneumococal Disease.10th ed.Public Health Foundation; 2007.p.255-68.

[4] Lang PO, Govind S, Mitchell WA, Siegrist CA, Aspinall R. Vaccine effectivenessin older individuals: what has been learned from the influenza-vaccineexperience. Ageing Res Rev. 2011 Jul;10(3):389-95.

[5] Koldaş ZL. [Vaccination in the elderly population]. Turk Kardiyol Dern Ars. 2017 ; 45 (Suppl 5): 124-127.

[6] Harper SA, et al. "Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices (ACIP)." Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR Recomm Rep 53 (2004): 1-40.

[7] Wang IK, Lin CL, Chang YC, Lin PC, Liang CC, Liu YL, Chang CT, Yen TH, HuangCC, Sung FC. Effectiveness of influenza vaccination in elderly diabetic patients:a retrospective cohort study. Vaccine. 2013; 31(4):718-24.

[8] Colquhoun AJ, Nicholson KG, Botha JL, Raymond NT. Effectiveness of influenzavaccine in reducing hospital admissions in people with diabetes. EpidemiolInfect. 1997;119(3):335-41.

[9] Giannattasio A, Squeglia V, Lo Vecchio A, Russo MT, Barbarino A, Carlomagno R,Guarino A. Pneumococcal and influenza vaccination rates and their determinants inchildren with chronic medical conditions. Ital J Pediatr. 2010;36:28.

[10] Satman I, Akalin S, Cakir B, Altinel S; diaVAX Study Group. The effect ofphysicians' awareness on influenza and pneumococcal vaccination rates andcorrelates of vaccination in patients with diabetes in Turkey: an epidemiologicalStudy "diaVAX". Hum Vaccin Immunother. 2013;9(12):2618-26.

[11] National Vaccine Advisory Committee. A pathway to leadership for adultimmunization: recommendations of the National Vaccine Advisory Committee:approved by the National Vaccine Advisory Committee on June 14, 2011. PublicHealth Rep. 2012 Jan-Feb;127 Suppl 1:1-42.

[12] Çiftci F, Şen E, Demir N, Kayacan O. [Which factors effects patients beliefand attitudes about influenza vaccination?]. Tuberk Toraks. 2017; 65(4):308-316.

[13] Arslan İE, Altınova A, Törüner FB, et al. Awareness of Hepatitis B, Influenza and Pneumococcal Vaccine among Diabetic Patients. Gazi Medical Journal 2016;27(3).

[14] Özsu S,Uçar E,Arslan Y,Maden E,Bilgiç H.The Frequency of Influenza and Pneumococcal Vaccination in COPD. Solunum 2011;13(1):21-25.

[15] Akman M,Sarısoy M,Uzuner A, et al.The vaccination status and knowledge level of vaccines among adults over the age of sixty-five.The Journal of Turkish Family Physician. 2014;3:19-23.

[16] Martín Martínez MA, Carmona Alférez R, Sarría Santamera A. [Improvement of theanti-flu vaccine coverage in people older than 65 years, but whom do wevaccinate?]. Med Clin (Barc). 2010 ;134(15):708-9

Citation: *Senay Ozturk Durmaz & Mehmet Celik, "The Evaluation of Seasonal Influenza Vaccination Rates of Patients in Risk Group and Factors Affecting Influenza Vaccination Rate", International Journal of Research Studies in Medical and Health Sciences. 2019; 4(3): 17-20.*