Level of Knowledge and Attitude of the Patients Older than 65 Years About Pneumococcal Vaccine

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Abstract: Pneumococcal vaccine is a high protectional vaccine that is especially recommended for patients with COPD (chronic obstructive pulmonary disease) over 65 years. It is important for the prevention of many complications secondary to infection. In present study, it is aimed to determine the level of knowledge and attitude of the patients over 65 years, who had admitted to hospital for any reason, about pneumococcal vaccine. Study was performed on December 2013. Thirty-three patients over 65 years, who were admitted to İzmir Tepecik Education and Research Hospital for any reason, were chosen randomly. A questionnaire, related with this aim, was performed. Data were evaluated as percentages. Fifteen patients were men (45.6%) and 18 were women (54.4%). Forty-two percent were housewife (n:14), 18.4% (n:6) were retired, others were from different professions. Only 1 patient had an university degree and 14.8% (n:5) were illiterate. Number of the patients who heard about pneumonia was 18 (54.6%). Among them, 94% (n:17) described pneumonia correctly. Only 1 patient had pneumonia, hospitalized and treated in the past. All of the patients stated that they don't have lower respiratory tract infection and influenza infection so often. Sixty-three point five percent (n:21) of the patients has heard about pneumococcal vaccine. Of the 21, 54.5% had heard from their family doctor, 46.5% from social media. None of the patients have an idea about the protective effects of the vaccine. Only 18.4% (n:6) of the patients had pneumococ vaccine, and only 12.3% of them mentioned about its benefits. The percentage of patients who have correct knowledge about vaccination period was 21.7% (n:7). The percentage of patients who know the side effects of the vaccine was around 33.2% (n:11). Knowledge level of the patients over 65 years about pneumococ vaccination was quite low and only small part of the patients were vaccinated. Family doctors must play an important role on this subject.

Key words: Infection, pneumococ, vaccine.

1. Introduction

Streptococcus pneumoniae is a gram-positive, alpha-hemolytic, anaerobic microbe. It is aero tolerant, spore-free, immobile and capsulated member of the genus *Streptococcus*. It is an important risk factor for the community, especially for the elderly.

Advanced age is a special issue that requires a different approach in psychological, physiological and socioeconomic aspects. Nowadays the healthy and independent population over age 70 has increased. Recent studies prove that people who don't have a chronic disease and have a healthy lifestyle can have as

much the same body function capacities as normal. To live a healthy and functional lifestyle when growing older is multifactorial. One of them is the primary care health opportunities. Besides, vaccination is part of the primary care health services [1]. Vaccination programs for grownups especially elders are mostly ignored. Many adults are not vaccinated sufficient as the vaccination programs require. Responsible for that are multifactorial like poor knowledge about vaccine preventable diseases, the discussions about efficiency and reliability of the vaccines, ignoring the age importance in vaccinating, the high vaccine prices and the poor infrastructure regarding adult vaccines [2]. The mortal cases in the age group over 65 are caused in the first place by infections (one third of all causes), in

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the second place by acute and chronic diseases [3]. The physiological changes with age and the present chronic diseases cause a different clinical course by infections [4, 5].

Pneumococcal infections cause serious complications on seniors. Community acquired pneumonie, invasive infections, meningitis are often seen by the people over 65 years. Lower respiratory tract infections caused by pneumococcal microorganism which are seen in the population by a rate of 4.4%, have a third fold rate by people over age 65 [6]. The benefits of the pneumococcal vaccine/primary care over pneumococcal infections which are the most important morbidity and mortality cause by elderly population, are proven in many studies [7-10]. USPSTF (United States Preventive Services Task Force) recommend all people over age 65 without immunodeficiency the pneumococcal vaccine [2].

In present study, the profit of the vaccination program, an important part of primary care, by determining the standart knowledge of random elder people over age 65 who had different hospital applications about the pneumococcal vaccine and their approach to the vaccine was assessed.

2. Materials and Methods

In December 2013, a survey about the pneumococ vaccine was implemented random on 33 people over age 65 who had come to İzmir Tepecik Education

Research Hospital with different health problems. Volunteering was the basic criteria. Subjects were asked about peumonia and pneumococ vaccine in addition to demographic values such as age, sex and so on. All data were entered into SPSS 16.0 program and percentage method was used for statistical analysis.

3. Findings

Study was contained 15 male (45.6%) and 18 female (54.4%) participants. Forty-two point two percent were housewives, 18.7% were pensioners, the others were from different work professions. Only one was university graduate and 14.7% were analphabetic. Fifty-four point six percent had heard about a disease named “pneumonia” and 93.8% of them knew the right definition. Of all patients only one had a pneumococcal infection and inpatient treatment. The study group stated that they hardly had lower inspiratory tract infections or flu. Sixty-three point five percent of them heard of pneumococcal vaccine, 36.5% never heard of it. Fifty-four point five percent of those who have heard were informed by their family physician, 46.5% heard of it from media or their social environment. None of them had known about the vaccines protectiveness feature. Only 18.4% were vaccinated and 12.3% of them expressed seeing benefits. Twenty-one point seven percent knew about the right vaccine interval. Thirty-three point two percent knew about the vaccine side effects.

Table 1 Percentage of the answers given to the questions.

Question	Answer (%)
Percent of people who heard about pneumonia	54.6
Among those who heard knowing the right definition	93.8
Percent of people who had peumococcal infection	3
Rate of people who had often the flu.	-
Percent of people who knew about the pneumococ vaccine	63.5
Percent of people informed by the family physician	54.5
Percent of people informed by the social environment	46.5
Percent of people informed about the pneumococ vaccine protectiveness	-
Vaccinated with the pneumococ vaccine	18.4
Benefiting from the vaccine	12.3
Being informed about the vaccine interval	21.7
Being informed about the vaccine side effects	33.2

4. Discussion

One of the successes of the 20th century is the decrement of diseases incident through vaccination. Protectiveness against diseases morbidity and mortality through vaccination is more important for adults than children. It is estimated that each year 30,000-50,000 adults die of diseases which could be provided by vaccination. Although there are not clear information about vaccination against pneumococcal microorganisms, a study accomplished by Taşbakan and colleagues proved that 9.2% of COPD (chronic obstructive pulmonary disease) patients knew about the pneumococcal vaccination necessity [11].

Compared with the world literature, knowledge about the pneumococ vaccine and the vaccination rate, is rather low. In present study, the results showed that the standart of knowledge and vaccination rate for the pneumococ vaccine was similarly low. Those who knew about the pneumococ vaccine or were inoculated with the pneumococ vaccine were mostly informed and redirected by their family physician.

By a study in China's urban areas with 3,000 people over the age 60, it was showed that 61.65% thought of pneumonia as a serious disease. Less than 50% knew about the pneumococcal vaccines efficiency and reliability and only 1.23% were immunized with the vaccine. The study signified that only steady education would increase the vaccination rate [12].

In America it is thought as only 15% of all population over 65 were in the risk group for pneumonia and that most of them should be informed of pneumonia and vaccination [13]. For this purpose special education programmes are available. Streptococcus pneumonia is an important morbidity and mortality cause for elderly people all over the world. Although there are excellent antimicrobial treatment and efficient healthcare, the respiratory tract infections and invasive infections caused by pneumococs are still an important health problem. PPSV23 a 23 valent pneumococcal polysaccharide

vaccine available since 1983 is recommended to seniors and for everyone who has an increased risk of infection like a chronic hearth disease, a chronic lung disease, HIV infection, sickle cell anemi, splenectomy. The serotype 23 provides protection against all invasive pneumococcal infections up to 90% worldwide. Various countries include the PPA in their national vaccine program and encourage the use of it [14]. However the sufficient education and vaccination worldwide have not been provided yet.

5. Results

The rate for the standart of knowledge and vaccination with the pneumococ vaccine which is admitted as necessary and effective for people over age 65 is quite low. Having a more organized and efficient system for giving instructions and informations in primary care and paying more attention to the primary service should be aspired in this case.

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