



VACCINATION STATUS AND FACTORS AFFECTING VACCINATION AMONG DIABETICS

Dr. Kevser Onbaşı¹, Dr. Bengür Taşkıran², Dr. Lezan Keskin³, Dr. Türkan Paşalı Kilit⁴, Dr. Serdar Üçgün⁴.

Dumlupınar University Medical Faculty, ¹ Department of Endocrinology, and ⁴ Internal Medicine, Kütahya Evliya Çelebi Training and Education Hospital, Kütahya,

²Department of Endocrinology, Eskişehir Yunus Emre State Hospital, Eskişehir, and ³Department of Endocrinology, Malatya State Hospital, Turkey.

Abstract: Vaccines are the most effective tools for preventing some infections. World Health Organization (WHO) and Ministry of Health (MoH) in Turkey recommends vaccination for people with diabetes. Our aim was to determine the prevalence of vaccination rates among diabetes in three different cities (Kütahya, Eskişehir and Malatya) in Turkey. 475 patients (307 female, 168 male) attending outpatient clinics for endocrinology were asked to fill in a questionnaire. The vaccination rates were very low. The rate being vaccinated was 27.2 % for influenza. The vaccination rate for pneumococcus, tetanus and hepatitis B were 8%, 20.6% and 16.2 %, respectively. The vaccination rates among type 1 diabetics were higher than type 2 diabetics. Survey results indicated that leading factor negatively influencing vaccine uptake for influenza was that 25.9% of diabetics did not know that they are in risk for influenza and 5.3% do not believe that there may be a threat of influenza pandemic or epidemic. 6.1% did not want vaccination because of side effects. The reason for the lowest vaccination rate for pneumococcal vaccine may be dependent on the factor that this vaccine is not provided by health care providers, but the other vaccines are free for risk groups in Turkey. Also the pneumococcus vaccine is not well known among diabetics, because 60.6% of diabetics in our study population did not hear about the vaccine. 46.3% of diabetics reported that they did not know that there is a need of booster for tetanus immunization. Increased awareness of physicians may help improve vaccination rates against influenza, pneumococcal disease, tetanus and hepatitis B. Education programs for physicians and also diabetic patients may improve the vaccination rates in patients with diabetes.

INTRODUCTION:

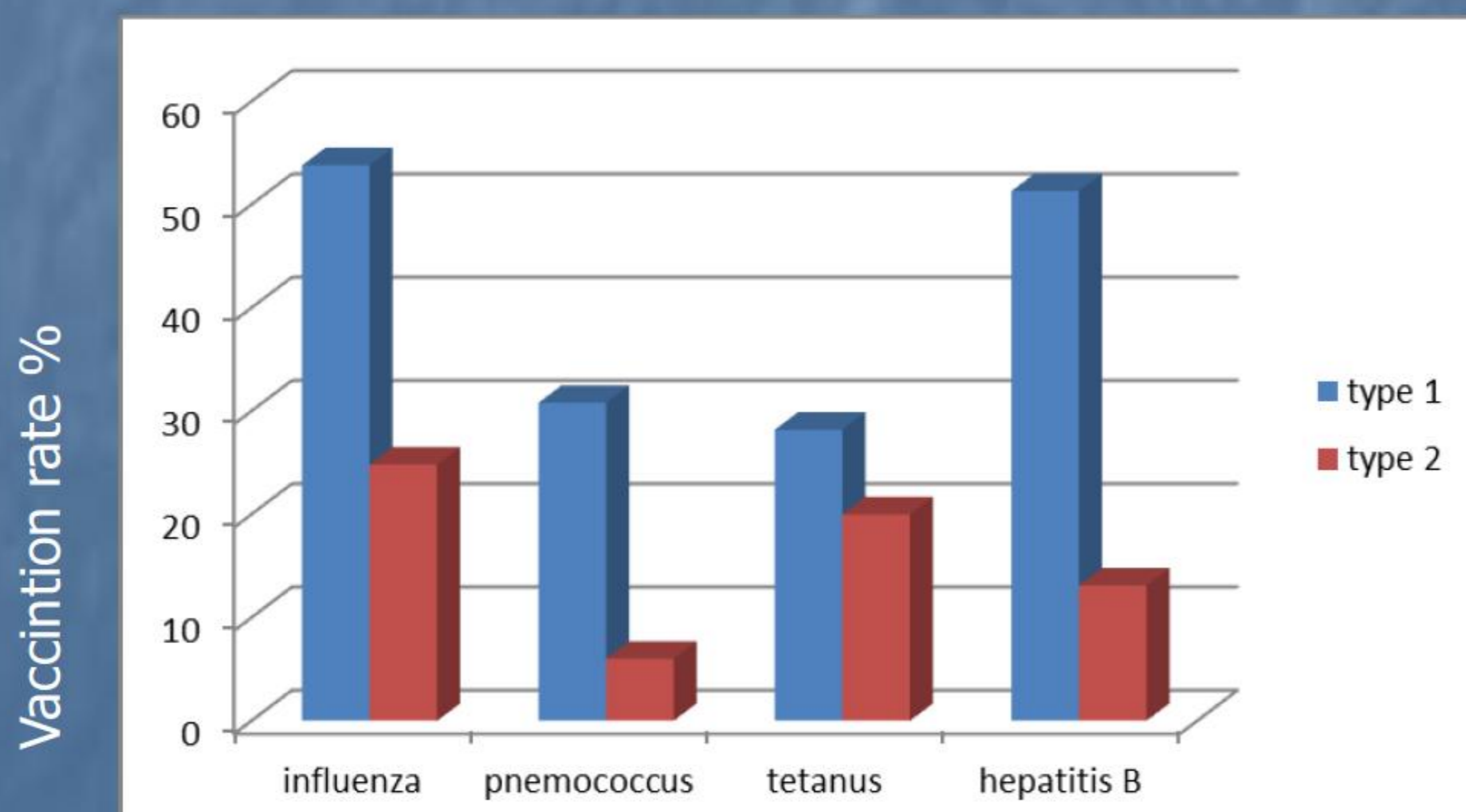
Seasonal influenza is a major problem for public health with a major socioeconomic impact. Worldwide, influenza is responsible of a lot of cases with severe illness and many deaths each year, especially in high-risk groups, like the elderly (≥ 65 years) population, in children up to 5 years of age, pregnant women, and people with certain chronic diseases (1). Many publications suggest that vaccination of patients with diabetes against influenza has been effective in reducing the hospital admissions during influenza epidemics and also the pneumococcal vaccine is also effective in reducing the burden of invasive pneumococcal disease (IPD). Immunization can reduce the cost of human suffering and community healthcare expenditure in diabetic patients. The Society of Endocrinology and Metabolism of Turkey (SEMT)'s diabetes guidelines recommend the influenza vaccination on a yearly basis and pneumococcal vaccination once in a lifetime for diabetes patients (2). Patients with diabetes are at increased risk of infection by the HBV than nondiabetics. Hepatitis B vaccination is recommended for all unvaccinated adults with diabetes younger than 60 years as soon as feasible after diagnosis. Tetanus diphtheria Pertussis is also recommended in guidelines (3).

MATERIALS AND METHODS:

Our aim was to determine the prevalence of vaccination rates among diabetes in three different cities (Kütahya, Eskişehir and Malatya) in Turkey. 475 diabetic patients (307 female, 168 male) attending outpatient clinics for endocrinology and internal medicine were asked to fill in a questionnaire.

RESULTS:

The vaccination rates were very low. Vaccination rates are shown in figure 1.



The overall vaccination rate for influenza was 27.2%, and that of pneumococcus was 8% among the diabetic subjects. The vaccination rate for tetanus and hepatitis B were 20.6% and 16.2%, respectively. The vaccination rates among type 1 diabetics were higher than type 2 diabetics ($p < 0.001$).

Survey results indicated that leading factor negatively influencing vaccine uptake for influenza was that 25.9% of diabetics did not know that they are in risk for influenza and 5.3% do not believe that there may be a threat of influenza pandemic or epidemic. 6.1% did not want vaccination because of possible side effects. The reason for the lowest vaccination rate for pneumococcal vaccine may be dependent on the factor that this vaccine is not provided by health care providers, but the other vaccines are free for risk groups in Turkey. Also the pneumococcus vaccine is not well known among diabetics, because 60.6% of diabetics in our study population did not hear about the vaccine. 46.3% of diabetics reported that they did not know that there is a need of booster for tetanus immunization.

DISCUSSION:

Patients with diabetes are at increased risk of medical complications attributable to influenza infections. Therefore is it recommended by the World Health Organization that these patients should be vaccinated against influenza annually (4). Our study showed that current influenza and pneumococcal vaccination coverage among individuals with diabetes in our country is far below the recent recommendation goals. Physicians attitudes are also important for the use of vaccination. Sometimes although physicians knowledge of guidelines is good, they may fail to translate this knowledge into clinical practice. Adherence to these guidelines may be poor. Non-compliance of the patients' is another important issue for coverage of vaccination (2). Hepatitis B virus (HBV) may cause a life-threatening liver infection that often leads to chronic liver disease. HBV can be transmitted by medical equipment. Exposures to HBV may occur as a result of assisted monitoring of blood glucose devices. Tetanus diphtheria may also be recommended every 10 years (3). Our patients' knowledge about these recommended vaccines are not sufficient.

CONCLUSION:

Increased awareness of physicians may help improve vaccination rates against influenza, pneumococcal disease, tetanus and hepatitis B. Education programs for physicians and also diabetic patients may improve the vaccination rates in patients with diabetes.

REFERANSLAR:

1. Prymula R, Usluer G, Altinel S, Sichova R, Weberelrud F. Acceptance and Opinions of Intanza/IDflu Intradermal Influenza Vaccine in the Czech Republic and Turkey, Adv Ther (2012) 29(1):41-52.
2. Satman I, Akalin S, Cakir B, Altinel S, and The diaVAX Study Group. The effect of physicians' awareness on influenza and pneumococcal vaccination rates and correlates of vaccination in patients with diabetes in Turkey. An epidemiological Study "diaVAX" Human Vaccines & Immunotherapeutics 9:12, 2618-2626; December 2013.
3. Kesavadev J, Misra A, Kumar DasA, Saboo D, Basu D, et al, Suggested use of vaccines in diabetes. Indian Journal of Endocrinology and Metabolism, Nov-Dec 2012; Vol 16 ; Issue 6, 886-893.
4. Renschmidt et al. Vaccines for the prevention of seasonal influenza in patients with diabetes: systematic review and meta-analysis BMC Medicine (2015) 13:53

