Subject:

Safety of pneumococcal and influenza vaccination in diabetes patients in South India

Abstract:

Aim:

Diabetes patients have an increased risk of influenza and pneumonia compared with healthy individuals. People with diabetes are six times more likely to be hospitalized during an influenza epidemic and are almost three times at higher risk of death due to pneumonia-related complications. Vaccinations are effective prophylaxis against these infections. However, it is important to analyze the risk of adverse events related with vaccinations. In order to address the non-compliance and resistance to vaccination among diabetes, we studied the risks of influenza and pneumonia vaccination in diabetes patients in South India.

Methods:

A retrospective analysis of 2073 diabetes patients who received routine vaccinations till 2011 was conducted in order to determine the safety of vaccination in different sub-groups. Post vaccination adverse events were collected from Diabetes Tele Management System (DTMS® and coded according to MedDRA terminology. Analysis was done for different age groups, sex, and duration of diabetes and associated co-morbidity.

Results:

1,696 (81.81%) patients received the pneumococcal vaccination and 377 (18.19%) patients received both pneumococcal and influenza vaccination. Only 78 (4.59%) patients from group of 1,696 and 31 (8.22%) patients from group of 377 had self-reported adverse events after vaccination. The odds ratio (OR) for adverse event occurrence in adults, adolescents, and the elderly were 0.68 (95% CI, 0.38-1.22), 2.35 (95% CI, 0.69-7.94) and 1.34 (95% CI, 0.71-2.52), respectively in those who were administered pneumococcal vaccination. Similarly, presence of any co-morbidity was associated with an OR of 1.96 (95% CI, 1.07-3.60). Longstanding duration of diabetes also increased the risk as patients with diabetes for <5 years. In patients administered both pneumococcal and influenza vaccines, the odds ratio (OR) for adverse events occurrence in adults, adolescents, and the elderly were revealed to be 0.66 (95% CI, 0.29-1.50), 3.81 (95% CI, 0.38-37.79) and 1.42 (95% CI, 0.60-3.31). Increased duration of diabetes also increased risk. Most of the adverse events were mild.All reported events resolved naturally or after symptomatic treatment.

Conclusions:

Vaccination was found to be safe in diabetes patients who had recent history of diabetes, but no co-morbid conditions. The safety and efficacy of pneumococcal and Influenza vaccina-tions provides justification for immunization in all eligible candidates as part of routine diabetes care. Large randomized controlled trials are the need of the hour to prevent complications in diabetes due to infections.

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