

Vaccination Coverage in Patients with Idiopathic Inflammatory Central Nervous System Demyelinating Diseases at Siriraj Hospital, a Single-center Experience

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ABSTRACT

Objective: Individuals with Idiopathic Inflammatory Central Nervous System Demyelinating Diseases (CNS-IIDDs) have an elevated risk for infection. Vaccination is key to reducing infection. This study aimed to determine vaccination coverage, the adverse effects of vaccination, and general vaccination knowledge in the patients.

Methods and Methods: A single-center cross-sectional study in the Multiple Sclerosis Clinic at Siriraj Hospital, Thailand, was performed using the designed questionnaires.

Results: Of 100 participants, 90% were female, with a mean (SD) age of 42 (12.9). Overall, all received compulsory vaccine coverage. For optional vaccines, the coverage was lower than expected, with rates of 3%, 4%, and 3% for human papilloma virus, pneumococcal, and zoster vaccines, respectively. Only 28% of participants received the 2021/2022 seasonal influenza vaccine. The only factor associated with the uptake of the influenza vaccination was the participants' health coverage. By asking questions to evaluate general vaccination knowledge, two questions related to vaccination and immuno-suppressive agents received the highest percentage of 'not sure' responses.

Conclusion: Vaccination coverage was lower than expected among Thai CNS-IIDDs patients, both for optional and seasonal influenza vaccines. Vaccination in these patients should be encouraged to prevent potential infections.

Keywords: vaccination, idiopathic inflammatory central nervous system demyelinating diseases, multiple sclerosis, neuromyelitis optica spectrum disorder, and anti-myelin oligodendrocyte glycoprotein antibody disease (A-MOGAD). (Siriraj Med J 2023; 75: 538-545)

INTRODUCTION

Idiopathic Inflammatory Central Nervous System Demyelinating Diseases (CNS-IIDDs) encompass multiple sclerosis (MS), neuromyelitis optica spectrum disorder (NMOSD), and anti-myelin oligodendrocyte glycoprotein antibody disease (A-MOGAD). Treatment in CNS-IIDDs mainly relates to immunosuppressive (IS) or disease-modifying agents (DMAs) aiming at reducing neuroinflammation. On the other hand, those agents increase the risk of infection among patients.¹ The retrospective study reported the overall rate of infection in MS patients

receiving infused, injectable, and oral medications of 37.3%, 36.8%, and 38.7%, respectively, with sinusitis, upper respiratory tract infection, and upper urinary tract infection being the leading infection causes.² A recent randomized controlled trial also showed an increased risk of infection, particularly in lower respiratory tract infections and herpes virus infections, among MS patients taking fingolimod.³ According to the retrospective cohort study, patients with MS were more likely to be hospitalized and die of influenza than individuals without MS.⁴ Although immunization would be key to reducing the infection

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