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Original article

Vaccination in patients from Brasília cohort with early rheumatoid arthritis



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ABSTRACT

Introduction: Patients with a diagnosis of rheumatoid arthritis (RA) are at increased risk of infections. Vaccination is a recommended preventive measure. There are no studies evaluating the practice of vaccination in patients with early RA.

Objectives: To evaluate the frequency of vaccination and the orientation (by the doctor) about vaccines among patients with early RA diagnosis.

Methods: Cross-sectional study including patients from the early RA Brasilia cohort. Demographic data, disease activity index (Disease Activity Score 28 – DAS28), functional disability (Health Assessment Questionnaire – HAQ), and data on treatment and vaccination after diagnosis of RA were analyzed.

Results: Sixty-eight patients were evaluated, 94.1% women, mean age 50.7 ± 13.2 years. DAS28 was 3.65 ± 1.64 , and HAQ was 0.70. Most patients (63%) had vaccination card. Only five patients (7.3%) were briefed by the doctor about the use of vaccines. Patients were vaccinated for MMR (8.8%), tetanus (44%), yellow fever (44%), hepatitis B (22%), influenza (42%), H1N1 (61.76%), pneumonia (1.4%), meningitis (1.4%), and chickenpox (1.4%). All patients vaccinated with live attenuated virus were undergoing immunosuppressive therapy, and were vaccinated inadvertently, without medical supervision. There was no association between the use of any vaccine and disease activity, functional disability, years of education, lifestyle, and comorbidities.

Conclusion: Patients were infrequently briefed by the physician regarding use of vaccines, with high frequency of inadvertent vaccination with live attenuated component, while immunization with killed virus was below the recommended level.

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Vacinação em pacientes da Coorte Brasília de artrite reumatoide inicial

RESUMO

Palavras chave: Vacina Artrite reumatoide inicial População brasileira

Introdução: Os pacientes com diagnóstico de artrite reumatoide (AR) apresentam risco aumentado de infecções. A vacinação é uma medida preventiva recomendada. Não há estudos avaliando a prática da vacinação nos pacientes com AR inicial.

Objetivos: Avaliar a frequência de vacinação e a orientação (feita pelo médico) sobre vacinas entre os pacientes com diagnóstico de AR inicial.

Métodos: Estudo transversal incluindo pacientes da coorte Brasília de AR inicial. Foram analisados dados demográficos, índice de atividade da doença (Disease Activity Score 28 – DAS28), incapacidade funcional (Health Assessment Questionnaire – HAQ), dados sobre tratamento e vacinação após o diagnóstico da AR.

Resultados: Foram avaliados 68 pacientes, sendo 94,1% mulheres, com idade média de $50,7\pm13,2$ anos. O DAS28 foi de $3,65\pm1,64$, e o HAQ de 0,70. A maioria dos pacientes (63%) possuía cartão vacinal. Apenas cinco pacientes (7,3%) foram orientados pelo médico sobre uso das vacinas. Os pacientes foram vacinados para tríplice viral (8,8%), tétano (44%), febre amarela (44%), hepatite B (22%), gripe (42%), influenza H1N1 (61,76%), pneumonia (1,4%), meningite (1,4%) e varicela (1,4%). Todos os pacientes vacinados com vírus vivo atenuado estavam em uso de imunossupressores e receberam as vacinas de forma inadvertida, sem orientação médica. Não houve associação entre o uso de nenhuma vacina e atividade da doença, incapacidade funcional, anos de escolaridade, hábitos de vida, comorbidades.

Conclusão: Os pacientes foram pouco orientados pelo médico com relação ao uso das vacinas, com elevada frequência de vacinação inadvertida com componente vivo atenuado, enquanto a imunização com vírus mortos ficou aquém do recomendado.

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Introduction

Infections are an important cause of morbidity and mortality in patients with rheumatoid arthritis (RA). It is estimated that these patients have a two-fold risk of developing infection when compared to healthy subjects of the same sex and age. The increased infectious susceptibility is due not only to the treatment used, but to the disease itself and to associated comorbidities. Infections occur more frequently in joints, bones, skin, soft tissues, and respiratory tract, being responsible, at least in part, for an increase in mortality in patients with RA, especially when they occur in the genitourinary and bronchopulmonary tracts. 3-6

Vaccination is the primary preventive measure against infectious diseases.⁷ In patients with RA, depending on the state of immunosuppression, the immunogenicity of the vaccination may be reduced, but is still effective.⁸ There are some cases of RA reported following the use of the vaccine, especially against hepatitis B, but there is no evidence of a causal relationship established. Thus, currently the administration of most vaccines recommended by the national immunization schedule can be performed safely with no effect on disease activity.⁷⁻⁹

The use of vaccines not containing living organisms, such as those for influenza (intramuscular), pneumonia, tetanus, diphtheria, pertussis, *Haemophilus influenzae* type B (Hib), hepatitis A and B virus, polio (inactivated – IPV), meningitis and human papilloma virus (HPV), is recommended in patients with rheumatic diseases, including RA.^{8,10} Among those, the

influenza and pneumococcal vaccines are the most suitable, with a higher level of evidence regarding safety and efficacy. All vaccines should be administered preferably before the start of treatment with synthetic or biological disease-modifying antifheumatic drugs (DMARDs), to try to achieve an adequate immune response. 8,11

The attenuated live vaccines should be avoided, whenever possible, in patients with rheumatic diseases. Included in this group are the following vaccines: MMR (measles, mumps, and rubella), BCG, influenza (nasal), chickenpox, shingles, typhoid, polio (OPV), smallpox and yellow fever. However, one must make an individualized assessment of patients, considering the degree of immunosuppression and the risk factors for acquiring these infections. 8,12,13

Despite the recommendations for the use of vaccines in patients with rheumatic diseases, the frequency of vaccination is suboptimal, reaching a maximum of 20%-35% in immunosuppressed patients. However, few studies have evaluated the vaccination coverage of RA patients, with most studies evaluating only influenza or antipneumococcal vaccines.

The only study evaluating vaccination in patients with early RA showed that the response of pneumonia vaccine was lower than that seen in the normal population. Moreover, that study also noted that the addition of infliximab to the therapy with methotrexate did not affect the response to the vaccine. ¹⁵

The Brazilian Society of Rheumatology has recently issued recommendations on vaccination in patients with RA. ¹⁶ However, no study evaluating the practice of vaccination, in general, in patients with early RA in Brazil has been published.

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