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Review article

Safe use of biological therapies for the treatment of rheumatoid arthritis and spondyloarthritides

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ABSTRACT

The treatment of autoimmune rheumatic diseases has gradually improved over the last half century, which has been expanded with the contribution of biological therapies or immunobiopharmaceuticals. However, we must be alert to the possibilities of undesirable effects from the use of this class of medications. The Brazilian Society of Rheumatology (Sociedade Brasileira de Reumatologia) produced a document based on a comprehensive literature review on the safety aspects of this class of drugs, specifically with regard to the

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treatment of rheumatoid arthritis and spondyloarthritides. The themes selected by the participating experts, on which considerations have been established as the safe use of biological drugs, were: occurrence of infections (bacterial, viral, tuberculosis), infusion reactions, hematological, neurological, gastrointestinal and cardiovascular reactions, neoplastic events (solid tumors and hematologic neoplasms), immunogenicity, other occurrences and vaccine response. For didactic reasons, we opted by elaborating a summary of safety assessment in accordance with the previous themes, by drug class/mechanism of action (tumor necrosis factor antagonists, T-cell co-stimulation blockers, B-cell depletors and interleukin-6 receptor blockers). Separately, general considerations on safety in the use of biologicals in pregnancy and lactation were proposed. This review seeks to provide a broad and balanced update of that clinical and experimental experience pooled over the last two decades of use of immunobiological drugs for RA and spondyloarthritides treatment.

Segurança do uso de terapias biológicas para o tratamento de artrite reumatoide e espondiloartrites

Palavras-chave:
Artrite reumatoide
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RESUMO

O tratamento das doenças reumáticas autoimunes sofreu uma progressiva melhora ao longo da última metade do século passado, que foi expandida com a contribuição das terapias biológicas ou imunobiológicos. No entanto, há que se atentar para as possibilidades de efeitos indesejáveis advindos da utilização dessa classe de medicações. A Sociedade Brasileira de Reumatologia (SBR) elaborou um documento, baseado em ampla revisão da literatura, sobre os aspectos relativos à segurança dessa classe de fármacos, mais especificamente no que diz respeito ao tratamento da artrite reumatoide (AR) e das espondiloartrites. Os temas selecionados pelos especialistas participantes, sobre os quais foram estabelecidas considerações quanto à segurança do uso de drogas biológicas, foram: ocorrência de infecções (bacterianas, virais, tuberculose), reações infusionais, reações hematológicas, neurológicas, gastrointestinais, cardiovasculares, ocorrências neoplásicas (neoplasias sólidas e da linhagem hematológica), imunogenicidade, outras ocorrências e reposta vacinal. Optou-se, por motivos didáticos, por se fazer um resumo da avaliação de segurança, de acordo com os tópicos anteriores, por classe de drogas/mecanismo de ação (antagonistas do fator de necrose tumoral, bloqueador da co-estimulação do linfócito T, depletor de linfócito B e bloqueador do receptor de interleucina-6). Em separado, foram tecidas considerações gerais sobre segurança do uso de biológicos na gravidez e na lactação. Esta revisão procura oferecer uma atualização ampla e equilibrada das experiências clínica e experimental acumuladas nas últimas duas décadas de uso de medicamentos imunobiológicos para o tratamento da AR e espondiloartrites.

Introduction

The treatment of autoimmune rheumatic diseases has gradually improved over the last half century, and has been expanded with the contribution of biological or immunobiological therapy (also called biological agents or disease-modifying drugs – DMD-biologicals). This entire process has been implicated in improving therapeutic outcomes and the quality of life, as well as in reducing the morbidity and mortality of patients.[1,2]

Concomitantly, there has been a proportional strengthening of Rheumatology as a medical specialty. Such a scenario is very favorable and signals an auspicious perspective for individuals suffering from autoimmune rheumatic diseases. Monoclonal antibodies and recombinant molecules (or fusion proteins), able to interfere with the signaling of cellular processes, multiply in a fast pace, and new therapeutic possibilities will be progressively added.[3–5]

However, as with any drug class, we must be alert to the possibility of undesirable effects from the use of immunobiological medicines – an aspect which becomes even more important, given the intense action of these molecules on various immunological processes of critical importance. Added to this is the fact that many of the targets of these molecules participate in multiple physiological processes, extending the range of possible effects of the respective inhibitors or antagonist drugs.

Security issues are important for the patient to attain a position of maximum possible well-being; such questions guide medical treatment since ancient times. With respect