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Biomarkers and investigations in rheumatoid arthritis: Do they change medical management?

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dentification of new biomarkers with a real clinical utility remains a major topic of interest in rheumatoid arthritis. Biomarkers have diagnostic, prognostic and predictive role in early diagnosis and management of rheumatoid arthritis. In diagnostic biomarker spectrum, the pre-existing commonly used biomarkers are rheumatoid factor and anti-cyclic citrullinated (anti-CCP) antibodies. Anti-MCV antibody against mutated and citrullinated vimentin, has evolved as a second line investigation used in patients of suspected rheumatoid arthritis with negative anti-CCP and rheumatoid factor. 14-3-3 eta protein is normally localized intra-cellularly and gets externalized in the inflammatory process. Its detection and other newer biomarkers like anti-CarP, Cartilage Oligomeric Matrix Protein (COMP), serum calprotectin and surviving have their relevance and are the future diagnostic and prognostic biomarkers in rheumatoid arthritis. The non-specific ESR and C-reactive protein still remains the age old bio-markers. A new score based algorithm criteria was adopted by ACR and EULAR 2010 for diagnosis. RF and anti-cyclic citrullinated (anti-CCP) antibodies have been allotted valuable scores signifying their importance in diagnosis. A definite rheumatoid arthritis classification needs a score of 6 or more out of 10. Even an abnormal CRP/ESR is allotted '1' score. Likelihood of rheumatoid arthritis increases with presence of anti-cyclic citrullinated antibodies and RF positivity. Rheumatoid factor also a prognostic biomarker, it needs further elaboration in its various formats-IgG, IgA and IgM. Anti-nuclear antibodies are best screening test. Repeated negative test can prognosticate to rule out SLE. These biomarkers have their relevance in commonly used scores monitoring therapy Disease Activity Score (DAS), Simplified Disease Activity Indiex (SDAI) and Clinical Disease Activity Index (CDAI). For better monitorization of disease activity, Multi-Biomarkers Disease Activity test (MBDA) classifies the disease as mild, moderate and severe. Prediction of response to different biologic therapy has nearly got established with presence of a particular biomarker.

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