

## Rheumatoid: Shifting the Paradigm, Arthritis to Disease

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### Editorial

Rheumatoid arthritis a well known immune mediated inflammatory disease that typically affects synovial joints and ultimately leads to synovial inflammation, erosions, progressive joint destruction, deformity and substantial disability. The disease affects approximately 1% of the adult population all over the world and almost 1.5 million adults in the U.S. [1].

The lifetime risk of rheumatoid arthritis in the United States as estimated in the Rochester Minnesota Mayo Clinic population is 4% among women and 3% among men [2].

RA was the 19th most common cause for years lost in disability in the U. S. in the year 1996, [3] with the number of patients achieving successful disease control or remission not exceeding 40% under standard care measures using conventional disease modifying drugs (DMARDs), corticosteroids and nonsteroidal anti-inflammatory drugs [4].

It wasn't until late in 1998, after the launch of the tumor necrosis factor inhibitors that the rheumatologists experienced the success of handling the outstanding challenge of erosive arthritis with rheumatoid.

Within the last one and half decades the treatment paradigm in RA experienced a dramatic shift from simply treat to treat to target. The introduction of biologic disease modifying anti-rheumatic drugs with their proven ability to suppress inflammation by targeting cytokines, cytokine receptors and costimulatory molecules have effectively improved the outcome of RA with a significant proportion of patients mounting up to 70% achieving successful disease control. Such advent was accompanied by collateral efforts from the ACR task force to provide evidence based updates including criteria for identification of early RA and constructing guidelines for the effective implementation of the treat to target strategy in early and established arthritis. This was further stressed upon in the ACR annual meeting in Boston 2014 where the panel strongly recommended a treat-to-target strategy, as opposed to a non-targeted approach, in both early and established rheumatoid arthritis [5-8].

Statistical data provided by the CDC regarding disease burden displayed a change in hospitalization rate of RA patients with current practice, where the total number of hospitalized RA patients declined from 19,900 in 2004 to 15,600 in 2009 (2009 nationwide in patient survey) with women and patients aged  $\geq 45$  accounting for the majority of stays [9]. Such achievement was associated by reduction in the need for ambulatory care visits from 4 million visits in 1997 of which 3.6 million were non specialist physician office visits to 2.9 million visits in 2007 with 1.9 million visits to specialist physician including rheumatologists, cardiologists and other specialties [10,11].

With such notable success rheumatologists still have concerns regarding disease related comorbidity and mortality. In 1997, RA accounted for 22% of all deaths due to arthritis, with the RA patients being more than twice as likely to die as people of the same age in the general population. Around 40% of all deaths in individuals with RA are attributable to cardiovascular diseases including premature ischemic heart diseases and stroke with evidences supporting the potential contribution of uncontrolled inflammation and seropositivity to rheumatoid factor and/or anti-citrullinated protein antibody as potential markers of premature mortality [12-14].

Now that we are having ongoing developments in the treat to target strategy should we as rheumatologists widen our scope from targeting joint disease to targeting rheumatoid, the disease. Addressing disease related comorbidities in rheumatoid stands another challenge demanding additional guidelines regarding the use and safety of biologics DMARDs in the settings of disease related comorbidities apart from arthritis.

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