Annual European Congress of Rheumatology EULAR 2018

Rheumatic diseases factsheet

About rheumatic and musculoskeletal diseases

Rheumatic and musculoskeletal diseases (RMDs) are a diverse group of diseases that commonly affect the joints but can affect any organ of the body. There are more than 200 different RMDs, affecting both children and adults. They are usually caused by problems of the immune system, inflammation, infections or gradual deterioration of joints, muscles and bones. Many of these diseases are long term and worsen over time. They are typically painful and limit function. In severe cases, RMDs can result in significant disability, having a major impact on both quality of life and life expectancy.[1]

The burden of rheumatic diseases

Prevalence

- Symptomatic osteoarthritis, or degenerative joint disease, affects 15% of people worldwide.[2]
- It is estimated that by 2050 over 130 million people will suffer from osteoarthritis worldwide.[2]
- Rheumatoid arthritis (RA) is the most common autoimmune inflammatory form of arthritis and affects approximately 1 in 100 people worldwide, with women affected twice as commonly as men.[3]
- Gout is the most common cause of inflammatory arthritis in men[4] and affects almost as many people as RA[5]

Economic / social

- Rheumatic diseases are the most common cause of severe long-term pain and physical disability, and in Europe, 20 to 30% of adults are affected at any one time.[6]
- The burden of rheumatic diseases on people and society is expected to increase.[6]
- It has been reported that rheumatic diseases are one of the main causes of physical disability, contributing to societal and economic costs including loss of productivity in the workplace.[7]
- Rheumatic diseases are also a common reason for claiming disability pensions which impacts a country's economy.[8]

Emotional

- Two in five people with a rheumatic disease are limited in their everyday activities.[8]
- The pain and disability caused by a rheumatic disease can have an impact on the emotional well-being and mental health of a person.[9]
- The prevalence of clinical anxiety and clinical depression in those with a rheumatic disease is about twice that seen in the general population.[10]
- Rheumatic diseases not only affect the people suffering from them, but also their families who bear significant burden in terms of emotional and social costs to ensure relatives receive the necessary care and treatment.[11,12,13]

Risk factors

The underlying cause of most rheumatic diseases is unknown. However, several risk factors have been identified that increase the likelihood of developing the condition.[14,15]

Obesity

- Long-term consequences of rheumatic diseases have been shown to be more detrimental when a person is clinically obese or overweight.[16] Between 2013 and 2016, 22.7% of Americans had doctor-diagnosed osteoarthritis and this percentage was even higher among adults with heart disease (49.3%), diabetes (47.1%) and obesity (30.6%).[1]
- Obesity is increasing and between 1985 and 2007 the incidence of RA rose by an increment of 9.2 per 100,000 among women, with obesity accounting for just over half of this increase.[17]

Smoking

- Smoking is a risk factor for developing RA, it decreases the effectiveness of drugs prescribed to treat RA and can be a barrier to engaging in activities that may relieve symptoms, such as exercise.[18] Smoking-cessation may reduce the occurrence of several rheumatic diseases or improve their treatment success.[19]

Gender and age

- The prevalence of musculoskeletal conditions is higher among women and increases markedly with age.[10]
- The EU will have 58 million additional people aged 65 and over in 2050 in comparison to 2004.[20]
- Osteoarthritis prevalence is particularly likely to increase in an aging population.[21]

Lack of physical activity

- A physically active lifestyle is associated with a lower prevalence of musculoskeletal disorders.[22]

Diagnosis

- Diagnosing rheumatic diseases can be difficult because there are more than 200 different diseases and they often share similar symptoms.[8]
- Early diagnosis and treatment is important because it has been shown to help reduce pain and to slow and even prevent disease progression.[23,24,25]
- While some rheumatic diseases can be identified by a physician based on signs and symptoms, a diagnosis often needs to be confirmed in a hospital setting by performing a physical examination or ordering specific laboratory tests and undertaking imaging investigations.[8]

Treatment

Most rheumatic diseases cannot be cured, but in many cases, they can be managed so that patients can live with their disease. Early diagnosis, improved treatment options, and applying treatment to target principles have not only improved the percentage of patients in sustained remission, but also their quality of life and work productivity.[26,27] This represents a paradigm shift in the approach to treating patients with RA.[28] An important component of this is the concept of the “window of opportunity”, which refers to intense and effective treatment earlier in the disease course.[28]

Non-pharmacological

- The first line of treatment for most rheumatic diseases often consists of lifestyle changes such as a programme of physical exercise, an appropriate diet and stopping smoking.[24]

Pharmacological

- **Non-steroidal anti-inflammatory drugs (NSAIDs)** help control the symptoms of all rheumatic diseases by reducing pain, swelling, and inflammation in the joints. However, they do not slow down the progression of the disease.[29]
- **Glucocorticoids** control the symptoms of inflammatory rheumatic diseases.[30] They are anti-inflammatory hormones related to cortisol, a steroid produced naturally in the body. Despite their benefits, glucocorticoids are associated with significant side effects including diabetes, osteoporosis, hypertension, cataracts, and susceptibility to infections. Glucocorticoids are often prescribed in combination with other drugs and the dose is usually reduced as soon as possible.[31]
- **Disease-modifying antirheumatic drugs (DMARDs)** inhibit joint damage, suppress the acute phase response, decrease autoantibody levels and exert effects on long-term functional outcome beyond those on signs and symptoms alone.[32]
    - **Synthetic DMARDs**
        - Conventional synthetic DMARDs (csDMARDs) are drugs that have been developed traditionally, rather than using complex discovery mechanisms to selectively interfere with a specific molecule.[32]
        - Targeted synthetic DMARDs (tsDMARDs) have been developed to target a particular molecular structure.[32]
    - **Biologic DMARDs** are genetically engineered drugs that block cytokines, the proteins needed to cause an immune response.[32,33]
        - Bio-original DMARDs (boDMARDs) are the original version of a biologic drug.[32,33]
        - Bio-similar DMARDs (bsDMARDs) is the term given to describe officially approved, subsequent versions of bio-original DMARDs produced by a different company following the expiration of the patent on the original drug.[32,34]

Further information

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