

The prevalence and burden of arthritis

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Abstract

The prevalence of arthritis is high, with osteoarthritis (OA) being one of the most frequent disorders in the population. In England and Wales, between 1.3 and 1.75 million people have OA and a further 0.25–0.5 million have rheumatoid arthritis (RA), while in France some 6 million new diagnoses of OA are made each year. In 1997, ~16% of the US population had some form of arthritis. This prevalence is expected to increase in the coming years, as arthritis more often affects the elderly, a proportion of the population that is increasing. The economic burden of such musculoskeletal diseases is also high, accounting for up to 1–2.5% of the gross national product of western nations. This burden comprises both the direct costs of medical interventions and indirect costs, such as premature mortality and chronic and short-term disability. The impact of arthritis on quality of life is of particular importance. Musculoskeletal disorders are associated with some of the poorest quality-of-life issues, particularly in terms of bodily pain (mean score from the MOS 36-item Short Form Health Survey of 52.1) and physical functioning (49.9), where quality of life is lower than that for gastrointestinal conditions (bodily pain 52.9, physical functioning 55.4), chronic respiratory diseases (72.7, 65.4) and cardiovascular conditions (64.7, 59.3).

KEY WORDS: Arthritis, Osteoarthritis, Rheumatoid, Prevalence, Quality-of-life, Pain, Symptomatology.

Introduction

When considering the importance of medical issues, the first factor to take into account is the prevalence of the disorder. Arthritis, specifically osteoarthritis (OA), has been shown to have a high prevalence wherever such statistics are available. Indeed, OA is one of the most frequent disorders seen in the population. In England and Wales, between 1.3 and 1.75 million people are affected by OA and between 0.25 and 0.5 million people have rheumatoid arthritis (RA) or inflammatory rheumatism [1]. In France, data from a review of national health statistics during the early 1990s showed that 6 million new diagnoses of OA were being made each year [2]. This equates to ~8% of the French population being diagnosed with OA. In the USA, an estimated 16% of the population, or 43 million people, had some form of arthritis in 1997 [3]. Projecting to the year 2020, an estimated 18.2% of Americans will be affected by arthritic disorders, equivalent to 60 million people [4, 5].

The prevalence of arthritis and more especially OA increases with age in both male and female patients [3], as illustrated for the USA in Fig. 1. Most arthritis patients are aged 55 yr or older. It is reasonable to suppose that these data reflect the situation in other developed

countries, such as those in western Europe. For instance, NSAID use, which could logically be considered to reflect the prevalence of arthropathies, has been shown to increase with age in the UK [6]. Examining population demographics shows that there is an increase in the ageing subset of the population. UN population projections for 1995–2010 show an increase in the population aged 60 yr or older in both western Europe and the USA [7]. In 2010, the projected percentage of the population aged 65 yr or older in Europe is ~25%, up from ~20% in 1995. These data show an even more striking increase in the population aged 75 yr or older. The fact that the incidence of arthritis increases with age, coupled with the increase in the ageing subset of the population, mean that arthritis, which is a significant health care problem today, will become even more of a burden in the coming years.

The burden of a disease relates not only to its prevalence, but also to the cost of the disease to the health care system of a country. Governments in all countries are currently facing problems regarding the rational management of health care resources and so it is interesting to see how the economic burden of musculoskeletal disorders, of which OA is the most common, compares to that of other diseases. The economic burden of a disease comprises direct costs, such as the costs associated with drugs, medical care, hospitals, research, pensions and benefits, and indirect costs, such as premature mortality

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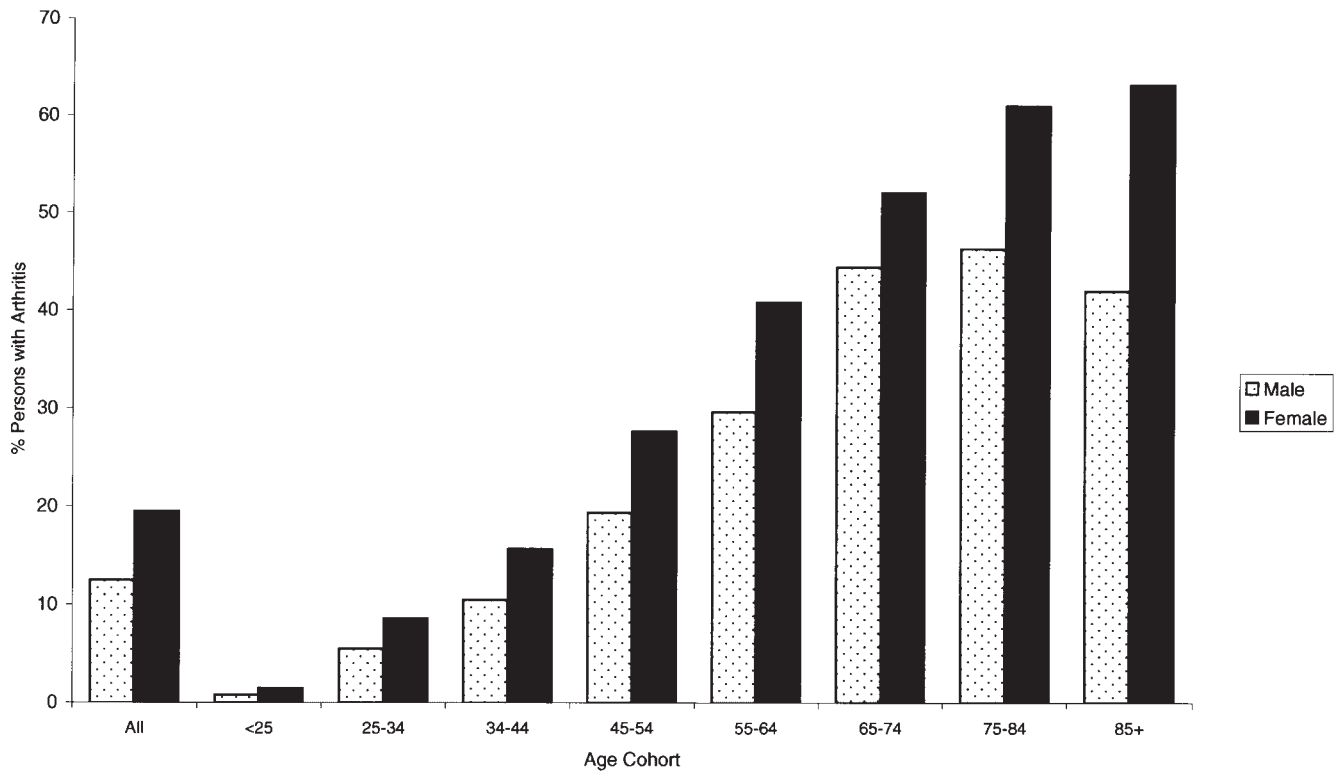


FIG. 1. Estimated prevalence of self-reported arthritis, USA, 1997.

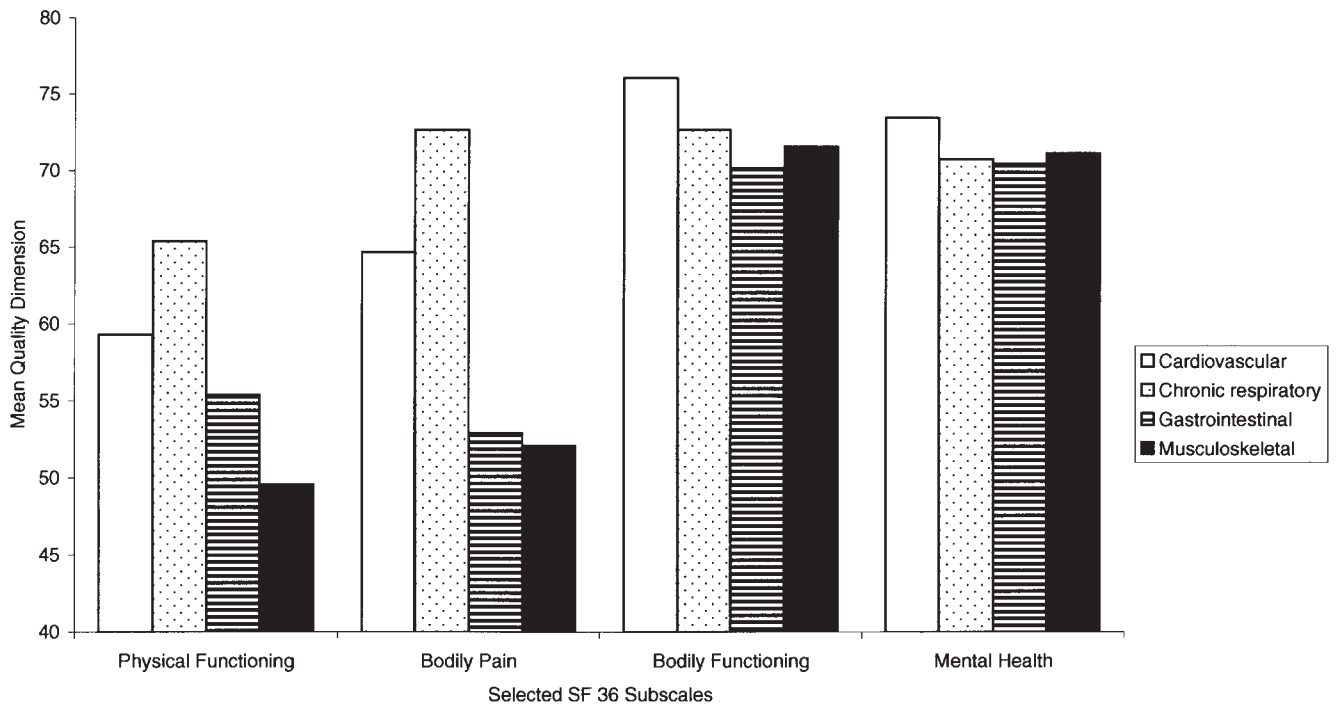


FIG. 2. SF-36 scale showing the impact of musculoskeletal conditions on quality of life in comparison with other chronic diseases.

and chronic and short-term disability. Canadian surveys have shown that musculoskeletal disorders rank highly as causes of morbidity and use of health services [8]. An estimate of the direct and indirect costs for 1986 of musculoskeletal disorders in Canada showed that they accounted for 10.4% of all health care costs and ranked fourth after cardiovascular disease (21.3%), injuries (13.9%) and cancer (11.6%) [9]. The economic burden of musculoskeletal disorders is therefore close to that of cancer and if additional costs, such as the costs of chiropractors and physiotherapists, are added to the equation, the economic burden of musculoskeletal disorders may even exceed that of cancer [9].

In a systematic review of the literature, Cooper [10] found that the economic impact of RA was reported to be substantial by all studies reviewed. The total annual cost per patient was found to range from US\$5720 to US\$5822. Medication represented between 8 and 24% of total medical costs, physician visits between 8 and 21%, and in-patient stays between 17 and 88%. The average number of days absent from work due to RA was reported to be in the range of 2.7–30 days per year [10]. The annual cost for musculoskeletal disorders has been estimated as up to 1–2.5% of the gross national product for the countries studied, including the USA, Canada, the UK, France and Australia [11]. This demonstrates that an important part of health care resources is directed to musculoskeletal disorders, especially OA, and that this burden should not be underestimated.

Arthritic conditions are also extremely painful for the patient. For decades, medical interventions have been aimed at increasing life expectancy. However, an important feature of health care in western countries is now aimed at increasing life expectancy while maintaining an optimal quality of life. Musculoskeletal disorders are associated with a significantly decreased quality of life in terms of physical and functional impairments [12]. The MOS 36-item Short Form Health Survey (SF-36) is a generic health status tool and is designed for use across a wide range of chronic diseases. It is the most widely used, too, for assessing quality of life and has been shown to have excellent reliability and validity in the USA [13, 14] and The Netherlands [15, 16]. There are several scales in the SF-36 that look at such aspects as physical functioning, pain, social functioning and mental health. Using this tool, musculoskeletal disorders have been shown to be associated with a poorer quality of life, especially in terms of bodily pain and physical functioning, than cardiovascular conditions, chronic respiratory diseases and gastrointestinal conditions. Using the SF-36, a lower mean score for a disease aspect indicates a poorer level of functioning. Musculoskeletal disorders had a mean score of 52.1 for bodily pain and 49.6 for physical functioning. This compares to mean scores of 52.9 for bodily pain and 55.4 for physical functioning for gastrointestinal conditions; corresponding values for chronic respiratory diseases were 72.7 and 65.4, and for cardiovascular conditions 64.7 and 59.3, as shown in Fig. 2. In fact, over all of the aspects considered by the SF-36, musculoskeletal conditions were associated with the poorest quality of life

of the conditions studied [12]. Using the summed rank score, where a higher score indicates poorer functioning, musculoskeletal disorders scored 78.5, compared with 69.0 for gastrointestinal disorders, 52.5 for chronic respiratory diseases and 37.0 for cardiovascular conditions.

Conclusions

In conclusion, there are three main elements that must be borne in mind when considering the impact of arthritis to both health care systems and the patients themselves.

- The prevalence of arthritis is already high and it will increase in the coming years due to the increasing proportion of the elderly in the population.
- Arthritis is a substantial economic burden.
- Arthritis can result in a severe impairment of quality of life in patients with persisting disease.

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