The impact of rheumatoid arthritis on the burden of disease in urban China.

Langley PC, Mu R, Wu M, Dong P, Tang B.

Source

College of Pharmacy, University of Minnesota, Minneapolis, MN 55455-0343, USA. p8366@msn.com

Abstract

OBJECTIVES:

The aim of this study is to assess the burden of disease associated with the impact of rheumatoid arthritis in urban China. Burden of disease is considered from four perspectives: (i) health-related quality-of-life (HRQoL); (ii) health status; (iii) employment status; and (iv) absenteeism and presenteeism.

METHODS:

Data are from the 2009 National Health and Wellness Survey (NHWS) of urban China. This is an internet-based survey and details the health experience of 13,007 respondents. The survey is representative of the urban China population at 18 years of age and over (18.1% of the total population). Of those responding to the survey, a total of 353 reported that they had been diagnosed with rheumatoid arthritis—an unweighted estimate of 2.65%. The sample design allows a comparison of those reporting rheumatoid arthritis with those not reporting this disease and, hence, a quantitative assessment of the burden of disease. Estimates of the quantitative impact of the presence of rheumatoid arthritis are through a series of generalized linear regression models. HRQoL is evaluated through the SF-12 instrument together with responses to the first item of the SF-12, self-reported health status. The SF-12 instrument generates three measures of HRQoL: the physical component summary (PCS), the mental component summary (MCS) and SF-6D utilities. Health status is captured as a self-report on a 5-point scale. Employment status is considered in terms of self-reported labor force participation, while absenteeism and presenteeism are estimated from the Work Productivity Activity Index (WPAI). Apart from a binary variable capturing the presence or absence of rheumatoid arthritis, control variables were included to capture the impact of other potential determinants of HRQoL and health status.

RESULTS:

The presence of rheumatoid arthritis in urban China has a significant deficit impact on HRQoL as measured by the PCS and MCS components of the SF-12, SF-6D absolute utilities and on self-assessed health status. In the case of PCS, the deficit impact of rheumatoid arthritis is -2.289 (95%CI: -3.042 to -1.536); for MCS -1.472 (95%CI: -2.338 to -0.605) and for utilities -0.025 (95% CI: -0.036 to -0.014). In the case of health status the odds ratio for the presence of rheumatoid arthritis is 1.275 (95%CI 1.031-1.576). The presence of rheumatoid arthritis has a marked negative effect, just under 8%, on the likelihood of workforce participation. Finally, the presence of rheumatoid arthritis is associated with an increased likelihood of absenteeism and presenteeism.
LIMITATIONS:

The NHWS survey has a number of limitations. As the NHWS is an internet-based survey, biases may be present due to the lack of internet penetration in the urban China population. The extent to which individuals and households have internet access is unknown. In addition, the NHWS relies upon respondents reporting they have been diagnosed with one or more specific disease states. These are not, given the nature of the survey, clinically verified. This also introduces a degree of uncertainty. Care should be taken in uncritically generalizing these results to the wider China population.

CONCLUSIONS:

The burden of disease associated with self-reported, diagnosed rheumatoid arthritis in urban China is substantial. Utilizing a series of multivariate models, substantial deficits are associated not only in reported HRQoL and health status but also in respect of employment status and, for those in employment, rates of absenteeism and presenteeism.

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