

Editorial

# Work-Related Issues and a High Burden of Disease Are Frequent in Axial Spondyloarthritis: What Should We Be Doing Better?



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Axial spondyloarthritis (axSpA) is a chronic progressive inflammatory disease leading to functional limitations, affecting physical and mental health.<sup>1</sup> The impact of axSpA on work productivity is a matter of great concern to society, since this disease starts early in life, and the subsequent loss of productivity contributes to the important socioeconomic burden of axSpA. Further, for patients themselves, work is a key aspect of impact. In a survey, the most important elements linked to quality of life were financial losses, work capacity, memory/concentration, and activities of daily living.<sup>2</sup>

In this issue of *The Journal of Rheumatology*, Inman and colleagues have assessed factors associated with work-related issues in Canadian patients with axSpA.<sup>3</sup> In all, 542 Canadian patients who participated in an international survey, the International Map of Axial Spondyloarthritis (IMAS) online survey, were analyzed. A first important finding is that, although the mean age was 44 years, only 53% were employed. This number could be compared to the mean employment rate in Canada, which in 2021 was 61%.<sup>4</sup> In the IMAS survey, employment status was associated with lower disease activity and a more favorable overall health status. A second finding is related to difficulties when working. The authors found that 90% of patients who were either employed, unemployed, or on short-term disability (n = 339) reported a work-related issue in the previous year, with the most frequent being absenteeism (49%), including missing work for healthcare provider (HCP)

visits, as well as difficulty fulfilling working hours (31%).<sup>3</sup> Work-related issues were associated with worse patient-reported outcomes (PROs), in particular higher functional limitations and psychological distress.<sup>3</sup> The number of work-related issues was also associated with higher disease activity (mean Bath Ankylosing Spondylitis Disease Activity Index [BASDAI] 6.1 vs 4.0;  $P < 0.001$ ). Interestingly, the association between disease activity and work-related issues disappeared when factoring in disability benefits.

These results indicate that even today in a country with wide access to targeted drugs (Canada), only half the patients who responded to a survey were working, and 90% of those working suffered from consequences of their axSpA on their work. Of note, the study by Inman et al reflects only the status of the survey respondents, since this was a survey based on voluntary participation. Further, there was no confirmation of diagnosis by a HCP, and no confirmation of work status. However, we advocate these results indicate that rheumatologists should take an interest in the work status of their patients.

The article by Inman et al confirms that axSpA is associated with substantial consequences on the ability to work, as has been shown in other countries.<sup>5</sup> For example, in Italy, the employment rate of patients with axSpA was 53% (compared to 58% in the general population).<sup>6</sup> It is probable that axSpA leads to lower employment rates through nonaccess to working status for patients with an early disease onset, and through loss of work for patients starting their disease later in life. The adverse work consequences of axSpA include not only absenteeism, as shown in the IMAS survey,<sup>3</sup> but also loss of productivity and reduction of access to positions with responsibilities.<sup>7</sup> This may be because axSpA often affects patients in the third decade of life, a crucial period in active life.<sup>8</sup>

Since ability to work is an important outcome, what can rheumatologists and HCPs do to improve the status of their patients? To answer this, we need to look at the elements associated to adverse work outcomes. In the IMAS survey, Inman

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et al showed an association between diagnostic delay and work-related issues (mean diagnostic delay, 10.2 vs 3.8 yrs;  $P < 0.001$ ). Other studies have reported a worsened health-related quality of life (HRQOL) in people experiencing longer delays before diagnosis.<sup>9</sup> These results may be an argument to consider closely the window of opportunity principle in axSpA.<sup>10</sup>

A second element that HCPs should address is physical function and mobility.<sup>11</sup> Unsurprisingly, adverse work outcomes in axSpA have been associated to labor-intensive jobs, poor physical function, structural damage, and impaired spinal mobility.<sup>8,12</sup> Here, adapted and progressive physiotherapy may be key.<sup>13,14</sup>

Importantly, disease activity plays a role in adverse work outcomes in axSpA—as shown by several studies, including the article by Inman et al.<sup>3,8</sup> In fact, disease activity indices have been shown to be associated with the impact of axSpA not only on work but also on other aspects of life, including pain, worse physical function, depression, anxiety, fatigue, and sleep alterations.<sup>15</sup>

We previously explored the variance of HRQOL (36-item Short Form Health Survey) explained by the disease activity score Ankylosing Spondylitis Disease Activity Score using C-reactive protein (ASDAS-CRP), in the French inception cohort, Devenir des Spondylarthropathies Indifférenciées Récentes (DESIR), and found ASDAS-CRP explained 27.4% of altered physical composite scores, and 14.6% of mental composite scores.<sup>1</sup> Many other studies and a recent systematic literature review have confirmed a link between disease activity and HRQOL.<sup>5,16,17</sup> The magnitude of this link varies according to the statistical methods used and the population analyzed. One important point to consider when discussing the link between PROs and disease activity is that in axSpA, disease activity scores are deeply influenced by the patient's assessment of their symptoms. This is the case in the patient-reported score BASDAI, but also (to a less extent) in the ASDAS.<sup>18,19</sup> This may lead to circularity.

Factors other than disease activity that contribute to HRQOL that healthcare professionals need to consider include extramusculoskeletal manifestations (uveitis, inflammatory bowel disease, psoriasis), widespread pain, and other comorbidities including anxiety and depression.<sup>1,8</sup> In particular, fibromyalgia is frequent in axSpA and there is a strong link between fibromyalgia and worsened HRQOL, fatigue, and adverse work outcomes.<sup>20</sup>

In conclusion, axSpA is associated with frequent alterations in the ability to work and in productivity at work, including in the recent survey in Canada.<sup>3</sup> Because of the link between disease activity and adverse work outcomes, as well as worsened HRQOL overall, it is important to aim for tight disease control in axSpA. Further, because adverse work outcomes and HRQOL are multifactorial, a holistic approach is warranted.

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