SHORT REPORT

Sickness absence for upper limb disorders in a French company

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Background Many studies have shown that musculoskeletal disorders (MSDs) have important economic and social consequences, including substantial costs and loss of productivity for industries. However, little is known about the impact of these conditions on sickness absence in industries.

Aim To describe the sickness absence taken for MSDs of the upper limb (ULD) in a French company and to study their association with demographic and socioeconomic factors.

Methods Sickness absence from 2000 to 2004 (5543 episodes) was studied using data from the company’s epidemiology registry and a questionnaire for each episode was completed by physicians. Incidence rates were calculated according to the gender, socioeconomic status and age.

Results The incidence rate of absence for ULD was six episodes per 1000 person-years. Rotator cuff syndrome and carpal tunnel syndrome were the most frequent diagnoses. Less frequent diagnoses, such as Guyon’s canal syndrome, had longer sickness absence (55.3 days). Incidence was higher for women and blue-collar workers. Incidence also increased with age.

Conclusions These results are consistent with other studies. Although absenteeism cannot be a surrogate for disease burden or incidence, it may be useful in the prevention of ULD, as it identifies the most disabling diagnoses and the working groups most at risk.

Key words Carpal tunnel syndrome; industry; rotator cuff; sickness absence; upper limb disorder.

Introduction

Musculoskeletal disorders (MSDs) are an important public health issue due to their socioeconomic consequences [1–4]. In recent decades, research has helped to improve epidemiological knowledge and management of MSDs, particularly of those affecting the upper limb (ULDs). Less is known, however, about their impact on sickness absence in industry. Studies focusing on workers’ compensation include only a proportion of workers [5], as sickness absence without compensation claims for work-related injuries is frequent in countries such as France, where workers are compensated for disability leave regardless of whether the health problem is work related.

Our objectives were to describe the sickness absence episodes for ULD in the French national power and gas company—Electricité de France and Gaz de France (EDF–GDF)—and to study their association with age, gender and socioeconomic status (SES).

Methods

The study population comprised 134 255 workers from EDF–GDF. EDF–GDF has its own medical insurance system handled by a department called Service Général de Médecine de Controîle (SGMC). A requirement of this medical system is compulsory verification of any sickness absence. All employees with sickness absence must see a SGMC physician, who codes diagnoses according to a simplified version of the International Classification of Diseases [6]. The information is then recorded in an epidemiology registry. The items available in the latter database include absences with diagnosis and duration and the worker’s profile (age, gender, occupation and industrial sector).

The database of sickness absence from January 2000 to December 2004 was reviewed to identify the absences that could have been due to ULD. Long-term sickness absence (1 year or more) was excluded as available data suggested that an absence for ULD would rarely be so
long. We anticipated that ULD would be coded as disease of the locomotor system, aponeuroses and tendons; arthroses or diseases of the nervous system not due to alcohol. A preliminary selection of these categories identified 21,890 sickness absence episodes possibly due to ULD. For each, a questionnaire was sent to the company physician, who checked whether it was an ULD and coded the diagnoses according to a list derived from a European consensus [7]. Finally, 5,543 sickness absence episodes were classified as due to ULD.

Annual incidence rates for sickness absence due to ULD were calculated by gender, age, diagnosis and SES coded according to the French classification [8]. The number of workers with at least one absence due to ULD was divided by the number of full-time equivalent workers aged 20–59 years in the corresponding category. Incidence rates according to the SES were calculated only for 2004 since this information was not available for the other years. The number of workdays lost per diagnosis was calculated. Differences in rates were tested using a chi-square test. P-values < 0.05 were considered statistically significant throughout the analysis.

This study was carried out in accordance with the ethical requirements for epidemiological research in France.

Results

Among the 5,543 sickness absence episodes, rotator cuff syndrome was diagnosed most frequently, accounting for 31% of absences (Table 1). Other common diagnoses were carpal tunnel syndrome (16%), epicondylitis (14%) and neck MSD (11%). Less frequent diagnoses included extensor/flexor tendonitis and tenosynovitis (8%), elbow, wrist and fingers arthritis (3%), cubital tunnel syndrome (2%), De Quervain’s disease (1%), Guyon’s canal syndrome (0.6%), radial tunnel syndrome (0.4%) and neuropathy caused by vibrations (0.2%). ‘Other’ ULD, coded as such because they did not match any of the diagnoses proposed in the questionnaire, accounted for 13% of absences.

Among the frequent diagnoses, carpal tunnel syndrome and rotator cuff syndrome were associated with the longest duration of sickness absence (36.7 and 30.8 days, respectively). Longer absences were also found for less frequent diagnoses, such as Guyon’s canal syndrome (55.3 days).

Most of the workers (77%) had a single sickness absence episode for ULD during the study period. For the remainder, there were predominantly multiple absences for the same diagnosis. The incidence rate of sickness absence spells due to ULD increased from 5.3 in 2000 to 6.3 per 1000 person-years in 2004. Sickness absence for ULD increased with age and incidence was higher for women than for men (6.5 and 5.7 per 1000 person-years, respectively, P < 0.01). Sickness absence due to ULD was associated with SES (P < 0.001). Office and blue-collar workers had a higher risk than managers and professionals or intermediate white-collar occupations (Figure 1).

Discussion

Our study found the annual incidence of sickness absence due to ULD to be six episodes per 1000 person-years. This result cannot be compared to findings in other studies, as we are unaware of other research reporting incidence of sickness absence for ULD [9]. Absenteeism cannot be a surrogate for disease burden or incidence as it depends on attitudes to sickness absence, which has many determinants. Nevertheless, absenteeism is

Table 1. Diagnoses associated with sickness absencea and average duration of sickness absences during the study period (2000–04)

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Number of episodes of sickness absence</th>
<th>Average duration of a sickness absence (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotator cuff syndrome</td>
<td>1722</td>
<td>30.8</td>
</tr>
<tr>
<td>Carpal tunnel syndrome</td>
<td>866</td>
<td>36.7</td>
</tr>
<tr>
<td>Epicondylitis</td>
<td>795</td>
<td>20.8</td>
</tr>
<tr>
<td>Neck MSDs</td>
<td>598</td>
<td>16.4</td>
</tr>
<tr>
<td>Extensor/tensor tendonitis and tenosynovitis</td>
<td>452</td>
<td>23.4</td>
</tr>
<tr>
<td>Elbow, wrist and fingers arthritis</td>
<td>173</td>
<td>31.9</td>
</tr>
<tr>
<td>Cubital tunnel syndrome</td>
<td>94</td>
<td>42.7</td>
</tr>
<tr>
<td>De Quervain’s disease</td>
<td>61</td>
<td>19.8</td>
</tr>
<tr>
<td>Guyon’s canal syndrome</td>
<td>31</td>
<td>55.3</td>
</tr>
<tr>
<td>Radial tunnel syndrome</td>
<td>22</td>
<td>27.8</td>
</tr>
<tr>
<td>Neuropathy caused by vibrations</td>
<td>9</td>
<td>39.7</td>
</tr>
</tbody>
</table>

a Limited to the diagnoses proposed in the questionnaire.
one dimension of the severity of the disorders and a useful indicator for the company and of the societal cost.

The study's weaknesses are its retrospective design and the absence of a standardized clinical examination. Moreover, the shortest absence episodes were not always seen by the physicians (in 2006, 28% of episodes ≤7 days were not checked). Nonetheless, only a few episodes of sickness absence due to ULD were likely to have been missed, since their duration was usually longer (Table 1).

The higher incidence of sickness absence episodes for ULD among women, the increase with age and the association with SES are consistent with the literature [10,11].

The most common diagnoses for ULDs resulting in sickness absence were rotator cuff syndrome, carpal tunnel syndrome, epicondylitis and neck MSD. Sickness absence due to ULD was associated with SES, gender (women had a higher risk) and age (incidence increased with age). Absenteeism could be a useful indicator in the prevention of ULD, as it identifies the most disabling diagnoses as shoulder disorders and shows that older workers, especially manual and office workers, are those most at risk.

### Key points
- Little is known about the impact of ULD on sickness absence in industry.
- Sickness absence due to ULD was associated with SES, gender and age.
- Absenteeism can be used to identify the most disabling diagnoses and the working groups at most risk in a preventive approach.

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### Conflicts of interest
None declared.

### References