Personal, biomechanical, and psychosocial risk factors for rotator cuff syndrome in a working population

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OBJECTIVE: Rotator cuff syndrome (RCS) is a major health problem among workers. The aim of the study was to examine the risk factors for RCS among workers exposed to various levels of shoulder constraints.

METHODS: From 3710 workers, representative of a French region’s working population, trained occupational physicians diagnosed a total of 142 cases of RCS among men and 132 among women between 2002-2005. Diagnoses were established by standardized physical examination while personal factors and work exposure were assessed by self-administered questionnaires. Statistical associations between RCS and personal and work-related factors were analyzed for each gender using logistic regression modeling.

RESULTS: The personal risk factors for RCS were age (odds ratio (OR) for 1-year increment 1.07, 95% confidence interval (95% CI) 1.05-1.09, among men and 1.08, 95% CI 1.06-1.10, among women) and diabetes mellitus (OR 2.9, 95% CI 1.0-8.6, among women). The work-related risk factors were (i) sustained or repeated arm abduction (≥ 2 hours/day) >90 degrees among men (OR 2.3, 95% CI 1.3-3.9) and >60 degrees among women (OR 1.8, 95% CI 1.0-3.2) or both conditions among men (OR 2.0, 95% CI 1.1-3.7) and women (OR 3.6, 95% CI 1.8-7.3); (ii) high repetitiveness of the task (≥ 4 hours/day) among men (OR 1.6, 95% CI 1.0-2.4) and women (OR 1.7, 95% CI 1.1-2.5); (iii) high perceived physical demand among men (OR 2.0, 95% CI 1.3-3.1); (iv) high psychological demand among men (OR 1.7, 95% CI 1.2-2.5); and (v) low decision authority among women (OR 1.5, 95% CI 1.0-2.3).

CONCLUSION: Personal (ie, age) and work-related physical (ie, arm abduction) and psychosocial factors were associated with RCS for both genders in this working population.