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Association between occupational exposure and Dupuytren's contracture using a job-exposure matrix and self-reported exposure in the CONSTANCES cohort

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ABSTRACT

BACKGROUND - Although several studies highlighted an association between occupational exposure and Dupuytren's contracture (DC), they were often limited by the highly selected population. We aimed to study this association using a job-exposure matrix (JEM) and self-reported exposure in a large cohort. **METHODS** - From CONSTANCES, a French population-based prospective cohort, we retrieved sex, age, social position, alcohol/tobacco intake and diabetes. Lifetime exposures were assessed by two different methods: with the biomechanical JEM 'JEM Constances', we assessed exposure to vibration and/or forearm rotation for participants whose work history was available, and from a self-administered questionnaire, we retrieved self-reported exposure to arduous work and/or carrying heavy loads. Surgery for DC was collected from the French Health Administrative database from 2009 to 2016. Multivariate logistic regression models adjusted for confounders were built to assess association between surgery for DC and occupational exposures. **RESULTS** - Work history was retrieved for 23 795 subjects among whom 98 underwent surgery for DC. Adjusted OR (aOR) was 2.08 (1.03-4.2) for being ever exposed to vibration and/or forearm rotation for subjects <60 years and 1.20 (0.69-2.08) for subjects ≥60 years. Data for self-reported exposure were available for 81 801 participants among whom 367 underwent surgery for DC. aOR for being exposed more than 20 years to arduous work and/or carrying heavy loads was 2.01 (1.32-3.04) for subjects <60 years and 1.04 (0.7-1.54) for subjects ≥60. **CONCLUSIONS** - Manual work is associated with surgery for DC among younger subjects. Monitoring exposed workers is important to prevent future functional limitations.

KEYWORDS: Dupuytren's contracture; Epidemiology; Job-exposure matrix; Occupational

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