

K Walker-Bone et al. Occupational Medicine (2006) Vol. 56 p 243 – 250

Risk factors for specific upper limb disorders as compared with non-specific upper limb pain: assessing the utility of a structured examination schedule

The research provides some evidence that non-specific arm pain is a different phenomenon to specific upper limb disorders. The evidence come from studies of risk factors.

Guidance on the prevention of non-specific arm pain tends to follow the lead set by the prevention of specific conditions. Indeed the same risk factors are assumed (e.g. force, repetition, non-neutral postures, stress, lack of rest...).

This study is quite unusual in that it assesses the risk factors for specific disorders at the same time, and using the same methods as those for diffuse RSI.

A questionnaire about upper limb pain and demographic, occupational and psychosocial risk factors was mailed to 10,264 adults from two English general practices, followed by standardized physical examination in those with arm or neck pain. SF-36 was used as a measure of general vitality.

Logistic regression was used to compare those with specific disorders and non-specific arm pain with those who had no neck or arm symptoms. There was a 59% response rate.

Our interest focuses on the results for disorders at the wrist; tenosynovitis, osteoarthritis and non-specific pain.

For tenosynovitis the significant risk factors were:

- Being female; OR = 2.7 (1.2–6.5)
- Age 45 to 54 (compared with 25 – 44); OR = 3.5 (1.4 – 8.6)
- Age 55 to 65; OR = 9.1 (3.6 - 22.9)
- Mid range SF-36 score; OR = 3.1 (1.1 – 8.3)
- Worst third SF-36 score; OR = 5.3 (1.9 – 14.4)
- Typing ≥ 1 hour per day; OR = 3.1 (1.3 – 7.8)

For Osteoarthritis the significant risk factors were:

- Being female; OR = 4.6 (2.3–9.1)
- Age 45 to 54 (compared with 25 – 44); OR = 13.0 (5.3–32.2)
- Age 55 to 65; OR = 20.9 (8.1–54.0)
- Mid range SF-36 score; OR = 3.0 (1.4–6.2)
- Worst third SF-36 score; OR = 4.9 (2.3–10.2)
- repetitive movement > 4 hours per day; OR = 2.1 (1.1–3.8)
- High work demands; OR = 2.2 (1.2–4.1)

For non-specific forearm/wrist pain the significant risk factors were:

- Being female; OR = 2.0 (1.3–3.2)
- Worst third SF-36 score; OR = 2.6 (1.6–4.2)

Comment

It should first be noted that the risk estimates were fairly imprecise. However, some general observations seem to be justified.

The results are notable in that the risk factors for specific conditions at the wrist are dominated by age, gender and general vitality (measured by SF-36). The results show that physical occupational exposures are risk factors, but weak by comparison. In risk management it would seem odd to focus interventions on variables that were of relatively minor importance; however it would seem from this research that the employer has no control over the major risk factors. Guidance for employers focuses on the things he can control.

For non-specific pain at the wrist, there was no evidence of the relevance of any physical exposure variable. Gender and general vitality are not under the control of the duty holder.

The authors concluded that when non-specific and specific complaints were assessed in the same way, there was a clear difference between them in terms of risk factors. The result suggests that prevention measures for specific disorders might not work for non-specific disorders, but this is only a tentative interpretation given that the evidence suggests that interventions to prevent specific disorders might not work anyway. It is worth reiterating that the precision of the findings was rather low, on the other hand, unlike most other studies, the design of the research was capable of leading to this conclusion.

