

Work Related Musculoskeletal Disorders in Spine Surgeons

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We read with great interest the article by Abolfotough et al¹ investigating the burden of work-related neck pain in spine surgeons, amongst members of the AO Spine network. The authors conducted a well-designed, cross-sectional, questionnaire-based study using an adaptation of the previously validated Nordic Musculoskeletal Questionnaire, hypothesising that age, high levels of work-related stress, and utilization of loupes would be associated with higher reported rates of neck pain. In a cohort of 383 spine surgeons, mainly orthopaedic-trained (the rest were neurosurgeons), 66.3% (n = 254) reported neck pain for at least 1 day during the previous year. It would have been helpful if the authors had provided a breakdown of the participants' surgical operation types beyond the scope of spine surgery (eg, non-spinal orthopedic operations for orthopedic surgeons; cranial operations for neurosurgeons) as those may have influenced the overall results. Notably, the overwhelming majority (82.5%) did not report taking any sick leave to manage their symptoms. The factors associated with neck pain were younger age (>45 years old), not participating in sports for more than 15 minutes per day, and exposure to physical stress. The authors reported that after adjusting for confounders, age was no longer associated with neck pain. Operative load, tenure and use of magnification were not associated with neck pain.

Recently, our group has published a similar study investigating the prevalence of work-related musculoskeletal disorders (WMSDs) in 409 neurosurgeons, including spine surgeons.² As this work was not discussed by Abolfotough et al, we would like to highlight its key findings and differences with the current article, as we believe it is the most closely related study available in the literature. We found that almost 88% (n = 358) of the participants in our study experienced WMSDs at least once in their career, with 264 of them reporting pain. When focusing on neck pain per se, the participants that reported its presence comprised 114 (27.9%) during surgery, 199 (48.7%) after surgery and 19 (4.6%) constantly. We did not identify any association between age, tenure and WMSDs. Interestingly though, we

identified that surgeons doing >300 operations per year reported significantly less WMSDs than those doing 100–300. We hypothesised that this difference could presumably indicate that surgeons with more operating theatre exposure learn to work more ergonomically. This was also suggested by Abolfotough et al as a potential explanation for the difference in neck pain between older and younger surgeons. In our study, an even larger percentage of surgeons (91.9%) did not take any sick leave to manage their symptoms. Up to 60% of 'open' spine surgeons reported neck pain after surgery, while the percentage for 'minimally invasive' spine surgeons reached up to 85%.

The problem of WMSDs in the medical profession in general and in the surgical specialties in particular has increasingly been recognised in the literature.^{3,4} We believe that further research ought to be conducted on the subject, focusing on real-time intraoperative measurements of postural ergonomic parameters and their associations with specific operation types and equipment.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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