



PREVALENCE AND EFFECTS OF MUSCULOSKELETAL PROBLEMS IN ORTHOPAEDIC SURGEONS

Orthopaedics

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ABSTRACT

The Orthopaedic surgeons are more prone to musculoskeletal injuries than any other medical professional group. The reason is that Orthopaedic surgeries require the operating surgeons to stand for long hours and hence induce extra stress and mental fatigue that predispose the surgeons to injury. The study included 66 subjects which included all the consultants, senior residents and post-graduate junior residents of the Orthopaedic department. All of the study participants were assessed using Nordic Musculoskeletal Questionnaire. The questionnaire was shared with all the subjects on their WhatsApp mobile application. Among the 66 subjects, only 46 (69.69%) completed the survey. Among the 46 who completed the survey, 32 subjects (69.56%) were post-graduate residents, 8 subjects (17.39%) were senior residents and 6 subjects (13.04%) were consultants. 34 respondents (73.91%) were had symptoms of some musculoskeletal issue. 21 respondents (45.65%) had involvement of two or more areas. Lower back region was the most common region involved in 20 subjects (43.47%). Neck pain was seen in 15 subjects (32.60%) while as wrist and hand symptoms were seen in 10 subjects (21.73%). 30 respondents (65.21%) attributed their symptoms to the work and 18 respondents (39.13%) felt that these symptoms prevent optimal function. There is a high prevalence of musculoskeletal problems in Orthopaedic surgeons of India which leads to a decrease in the functional capacity. Targeted interventions, training of residents and a healthy lifestyle should be considered to deal with the issue.

KEYWORDS

Musculoskeletal problems, Orthopaedic surgeons, Ergonomics

INTRODUCTION

Health care professionals are always at risk of many occupational hazards. The Orthopaedic surgeons are in this regard the most vulnerable group with high risk of machine injuries, radiation exposure, chemicals and smoke [1]. The Orthopaedic surgeons seem to be more prone to musculoskeletal injuries than any other occupational hazard [2]. Most Orthopaedic surgeries require the operating surgeons to stand for long hours and hence induce extra stress and mental fatigue that predispose the surgeons to injury [3,4]. Dealing with surgical instruments and repetitive actions are other reasons that predispose Orthopaedic surgeons to injuries [5,6]. Orthopaedic surgeons tend to have more incidence of musculoskeletal problems than the general surgeons, which is expected due to obvious reasons that have been already mentioned [7]. A number of studies have reported the high level of musculoskeletal symptoms in Orthopaedic specialists and residents [8-12]. Very few studies have been conducted in the Indian scenario to address this issue. We can not apply the western data to the Indian population because the ethnic differences in the body structure and capacity along with difference in working hours may become confounding factors [13]. Therefore, we planned this study to establish the incidence of musculoskeletal problems in our Orthopaedic surgeons and the consequences and effects of these injuries on the surgeon function.

MATERIALS AND METHODS

This study was conducted in a tertiary care hospital of north India. The study included 66 subjects which included all the consultants, senior residents and post-graduate junior residents of the Orthopaedic department. All of the study participants were assessed using Nordic Musculoskeletal Questionnaire [14]. The questionnaire was shared with all the subjects on their WhatsApp mobile application. The questionnaire consisted of a set of questions and assesses for any musculoskeletal complaints in different regions of the body [15]. The participants were also asked about the description and severity of symptoms and the treatment received and also if the symptoms were directly attributable to the work.

RESULTS

Among the 66 subjects, only 46 (69.69%) completed the survey. Among the 46 who completed the survey, 32 subjects (69.56%) were post-graduate residents, 8 subjects (17.39%) were senior residents and 6 subjects (13.04%) were consultants. The mean age of the respondents was 36.5 years. All the subjects were males. The average surgical hours per week was 13 hours. All of the respondents operated in the standing position. 34 respondents (73.91%) were had symptoms of some musculoskeletal issue. 21 respondents (45.65%) had involvement of two or more areas. Lower back region was the most

common region involved in 20 subjects (43.47%). Neck pain was seen in 15 subjects (32.60%) while as wrist and hand symptoms were seen in 10 subjects (21.73%). The treatment was sought most commonly in wrist and hand symptoms followed by lower back pain. The most common modality of treatment used was physiotherapy (56.52%). 30 respondents (65.21%) attributed their symptoms to the work and 18 respondents (39.13%) felt that these symptoms prevent optimal function.

DISCUSSION

This study has given us an insight regarding the high prevalence of musculoskeletal problems in the Orthopaedic surgeons, particularly lower back pain, neck pain, wrist and hand symptoms. Lower back and neck pain were the most common symptoms reported. The higher prevalence of musculoskeletal symptoms in Orthopaedic surgeons in our part of the world may be because of various reasons including differences in body structure, working hours and increase in the risk for specific injuries. We consider targeted interventions in Orthopaedic surgeons to tackle the problem as the situation is alarming. The interventions include proper seating, restriction of working hours, hand grip, structure of tools and hand grip positioning. The usage of power tools should be preferred over the manual ones. The design of the surgical instruments should be improved to increase the degree of freedom. Continuous medical education programmes should be conducted to train the residents and faculty about dealing with this issue. Also, the overall built and health should be boosted by regular exercises and a healthy lifestyle.

CONCLUSION

There is a high prevalence of musculoskeletal problems in Orthopaedic surgeons of India which leads to a decrease in the functional capacity. Targeted interventions, training of residents and a healthy lifestyle should be considered to deal with the issue.

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