

Prevalance of Upper Extremity Musculoskeletal Disorders in Dentists.

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Abstract

The aim of this paper is to determine the prevalence of upper limb musculoskeletal disorders in dentists. As Dentists are daily exposed to work related vibrations in their practice, Hand, wrist and arm pain are much more prevalent among them than the general public due to sustained grips. So this constant pressure on fingers and repetitive movements of the wrist leads to initiation of numbness and pain and so this study is conducted to acknowledge their pain and provide healing for the same.

Keywords: Vibratory movements, sustained grips.

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I. INTRODUCTION

- As Dentists are daily exposed to work related vibrations in their practice, Hand, wrist and arm pain are much more prevalent among them than the general public due to sustained grips. Due to frequent cervical flexion and prolonged awkward postures leads to incidence of cervical pain.²
- The forceful use of hand during vibratory equipments such as scalar, turbine, slow speed hand piece and other ultrasonic instruments are prime culprits for musculoskeletal problems. The type of movement and hand positions are repetitive in their practice. It is found that Dentists use their ring finger as their fulcrum while doing the procedures like exfoliation, extraction and root canal preparations. So this constant pressure on fingers and repetitive movements of the wrist leads to initiation of numbness and pain.²
- The origin of the pain in the hand, wrist or arm are often elusive and may not be due to a problem in the same area, in fact the source of the symptoms may be nowhere near where the symptoms are perceived.³ For example; Numbness in the fingers, which is one of the symptoms of carpal tunnel syndrome, sometimes has nothing to do with a problem in hand or wrist but may be due to cervical spine or thoracic outlet or trigger point in the forearm.¹
- CAUSES OF PAIN OF HAND, WRIST AND ARM PAIN:³

1. Tendonitis (De Quervain)
2. Arthritis (ex. Osteoarthritis of basilar joints)
3. Nerve compression ex. Thoracic Outlet, Cervical Radiculopathy, CTS)
4. Trigger Points (ex. Radial Tunnel Syndrome)
5. Equipment Issues (ex. poorly fitted gloves)

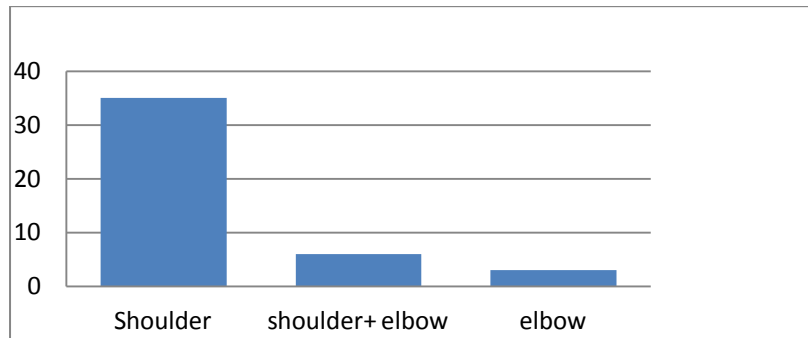


Figure 1: Showing distribution of pain in upper extremity

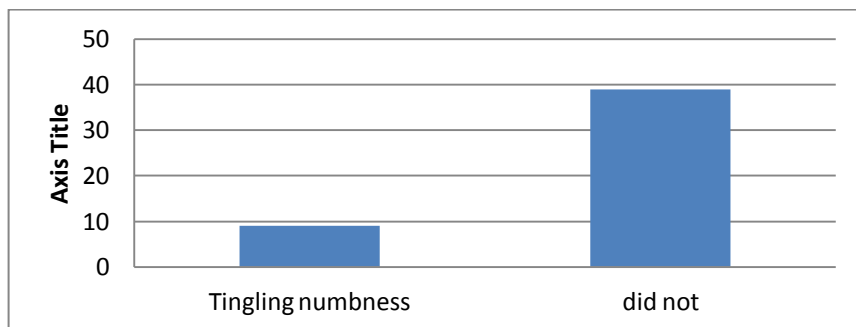


Figure 2: Showing distribution of pain pattern

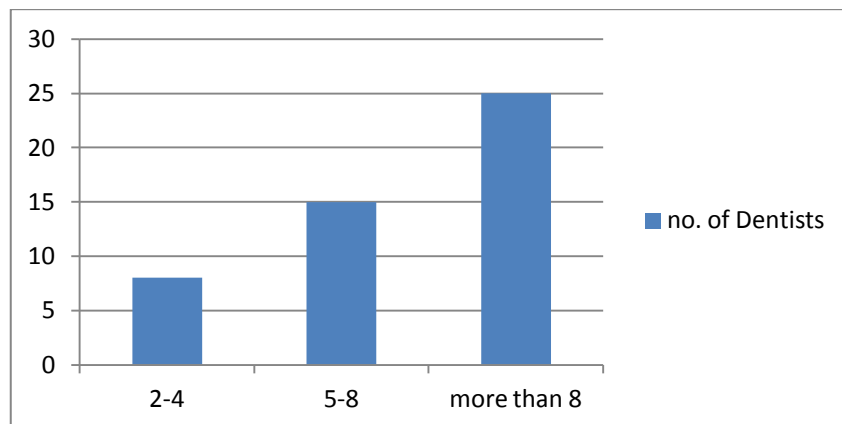


Figure 3: Showing distribution of number of working hours by dentist.

II. RESULT AND DISCUSSION

<u>Areas of musculoskeletal pain in the upper extremity</u>	<u>No. of dentists</u>	<u>Percentage of dentists having pain in the specific regions of upper extremity.</u>
Shoulder	35	72.91%
Shoulder with elbow component	6	12.5%
elbow	3	6.25%

Total samples	Dentists who experienced tingling	Per cent dentists who experienced tingling	People who did not experience tingling	Per cent dentists who did not experience tingling
48	9	18.75%	39	81.25%

Total dentists	No. of hours worked	No. of dentists working	Per cent dentists working for specific hours
48	2-4	8	16.6%
	5-8	15	31.25%
	More than 8	25	50.08%

The discussion obtained are;

Discussion: In this study, more females were included than males, and among 100 dentists, 43 were males while 57 were females. 72.91% of the dentists are more prone for shoulder pain, 12.5% dentists are prone for shoulder with elbow component and 6.25% are prone for elbow pain. The graph interprets that shoulder is the region more prevalent for musculoskeletal pain.

50 per cent dentists had stabbing pain and 50 per cent dentists had dull aching pain. People who did not experience pain before, are greater than ones who had experienced before. 45.83% of dentists had experienced this type of pain before and 54.1% dentists did not. In this study 18.75 per cent dentists experienced the tingling numbness while the other 81.25% did not experience tingling numbness. 50 per cent of the dentists who work for more than 8 hours experienced the maximum pain, 31.25% dentists experienced pain who worked for 5-8 hours and 16.6% dentists experienced pain who worked for 2-4 hours, which interprets that more is the working clinical hours by the dentists; more is the prevalence of musculoskeletal pain. 64.59% female dentists had pain and 35.4% of male dentists had musculoskeletal pain which concludes females are more prone for the prevalence of musculoskeletal disorders than males.

III. CONCLUSION

It was observed that the females are more prone for musculoskeletal disorder than males and the prevalence of disorder was found to be highest in shoulder compared to elbow and wrists.

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