

EVALUATION OF THE KNOWLEDGE REGARDING CORRELATION BETWEEN BODY POSTURE, PAIN AND OCCLUSION AMONGST THE PRACTICING DENTISTS OF NAVI MUMBAI – QUESTIONNAIRE BASED STUDY

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ABSTRACT

Aim and Objective: Maximum care, through interdisciplinary approach has become primary aim of practice. The aim of the study was to analyse Knowledge regarding correlation between body posture, pain and occlusion amongst the practicing dentists of Navi Mumbai. **Methodology:** A survey was conducted to analyse knowledge amongst practising dentists about correlation between body posture, pain and occlusion. It was concluded that by including postural considerations in our diagnosis we can treat the patient in a multidisciplinary collaboration and care for overall health and well being of patient. It is an ethical obligation to acknowledge connection of occlusion to TMJ disorders, Myofacial pain, Musculoskeletal pain within our scope of care to eliminate pathologic influences of occlusal signalling.

Results: If a patient reports with post restorative TMJ disorder or musculoskeletal pain, 85 % dentists then consider referral to a prosthodontist for a better treatment, but still extremely little consideration by less than 10 % dentists is given for referral to physiotherapists, psychiatrists, chiropractors, orthopedicians, osteopathic physician, sacral therapists. **Conclusion:** In conclusion only 21 % dentists were aware about interdisciplinary approach in treating patients with severe malocclusion, TMJ disorders, Musculoskeletal and myofacial pain and posture of body.

KEYWORDS: Posture, TMJ disorder, myofacial pain, occlusal disharmony

There is an increased awareness about medical conditions and management not only amongst clinicians but also patients. Interdisciplinary approach is required to treat any patient reporting to clinic. Optimum care and longevity of treatment has become primary aim of practice. Need has now come for dental team to work in collaboration with medical team to provide complete care. This paper intends to stress the need for multidisciplinary approach for treating patients who require extensive occlusal correction. P Amat^[1] carried out a review of literature of evidence of correlation between body posture and occlusion and has put forth existence of suggestive implications. Changes in position of mandible influences body posture.^[2] Body posture has effect on position of mandible with exception of centric relation and occlusion with maximum intercuspation, localization and reproducibility of both are not affected.^[3,4] Head posture influences occlusion.^[5,6] Head posture influences trajectories of closing and position of initial occlusal contacts.^[7-10] But Munhoz *et al.*, doesn't agree with the hypothesis that body posture provokes or aggravates masticatory discrepancy.^[11] But sample size used here was small and postural variable were many. Cervical postures appear to be strongly correlated with structural variations in sagittal and vertical dimensions of face.^[12-26] Along with these positive studies there are a large number of studies which donot support correlation between body posture and occlusion. But their number is far less than those with positive findings, and hence, they should make clinicians consider advisability of integrating evaluation and treatment of postural defects at the same time they are correcting discrepancies in masticatory system. Kraus H *et al.*, Huggare JA and Raustia

INTRODUCTION

AM through their studies support correlation found between temporomandibular joint disorder, body posture and pain.^[27-29] Travel JG, Simons DG and Watson DH, Trot PH through their studies found correlation between body posture, and pain.^[30] The aim of the study was to analyse Knowledge regarding correlation between body posture, pain and occlusion amongst the practicing dentists of Navi Mumbai.

MATERIALS & METHODS

Total of 50 practising dentists in dental college of Navi Mumbai were included in the study. Evaluation was done through a survey for comprising 26 questions. Statistical analysis was done by Percentage evaluation.

RESULTS

All dentists were aware about correlation between TMJ disorders and malocclusion. In spite of being aware only 46% evaluated TMJ before treating malocclusion. 59% dentists were aware about correlation between myofacial pain and malocclusion. In spite of being aware only around 29% evaluated myofacial pain before treating malocclusion. 82% dentists are aware about correlation between musculoskeletal pain and malocclusion, however only 35% evaluated musculoskeletal pain before treating malocclusion. 70% dentists were unaware about influence of body posture on occlusion. Amongst those who were aware only 23% evaluated body posture before treating malocclusion. When case of malocclusion reports to clinic, 68% treat it themselves with individual approach, whereas 42% refer to prosthodontist or an orthodontist, with least consideration given for referral to orthopedician and physiotherapist or psychiatrist and chiropractors. Only 30% dentists refer cases of TMJ disorders to prosthodontists for treatment with 30% dentists referring such patients to physiotherapists and oral surgeons. No considerations found for referral to psychiatrists and chiropractors. Only 50% dentists refer cases of severe attrition and bruxism to prosthodontists, again little consideration given for referral to psychiatrists, physiotherapists, and chiropractors. 66% treat cases all by individual approach. For a patient with musculoskeletal or myofacial pain, 70% dentists considered referral to psychiatrists, physiotherapists, with only 30% considering referral to prosthodontist for treatment of occlusion. Amongst all the dentists who have an

individual approach for treating patients with malocclusion or TMJ disorders or myofacial pain, 52% do not perform facebow transfer, 85% don't refine occlusion after cementation of single crowns, 5% do not refine occlusion after cementation of multiple unit fixed partial denture. Amongst those who refine occlusion, 20% dentists grind either fossa, or cusp and 20% keep the prosthesis out of occlusion. 30% dentist do not have follow up of their treated cases. If a patient reports with post restorative TMJ disorder or musculoskeletal pain, 85% dentists then consider referral to a prosthodontist for a better treatment, but still extremely little consideration by less than 10% dentists is given for referral to physiotherapists, psychiatrists, chiropractors, orthopedicians, osteopathic physician, sacral therapists. In conclusion only 21% dentists were aware about interdisciplinary approach in treating patients with severe malocclusion, TMJ disorders, Musculoskeletal and myofacial pain and posture of body.

DISCUSSION

Evolution is the greatest boon to mankind. Bipedal human beings have evolved from quadrupedal form. Greatest change is seen in posture of body. Quadrupeds demonstrated independent relationship between jaw and head posture. Spine was suspension bridge supported in front by skull hanging from shoulders and jawbone hanging from skull. In bipeds up righting of spinal column took place to form 'S' shaped curve; bony skull bent 90 degrees in middle so that front half stayed in level with ground and back half on top of spinal column. Stability of posture was maintained by muscles, which exerted traction from all around body, around periphery of head. On sides they attached mastoid process to shoulders, neck muscles. Shoulders attached to pelvis, which was reshaped with concave front surface. Behind attachment of muscles was onto thick occipital prominences and all over spine. In front muscles attached to chest and clavicle, which pulled hyoid bone which pulled down mandible, which was attached to zygoma and temporal bone. Thus all the muscles of body are attached to bones to balance head over spinal column, which work in unison. Any disturbance in one component can compensate by change in other component. Mandible is attached anteriorly to skull through teeth and posteriorly

through TMJ. Change in position of mandible is compensated in occlusion through teeth or at TMJ. Centric relation controls posture of mandible and all eccentric movements begin at this position. Excessively retruded centric relation position can cause forward head posture by evoking adaptation to protect airway. When head is centered on top of spinal column it is balanced, when it shifts forward bending forces are produced all along length of spine; Inner portion of shoulders shift forward and rotate inwards and outer portion stick out. Realignment of all the structures below takes place with pelvis rotating down and in front to thrust abdomen forward under head and chest sinks back. Every centimeter forward head posture triples muscle tension which function as myofascial chains and put strain on intervertebral joints. Muscles of posture are first affected and then muscles farthest from source are affected. Muscles cannot relax fully giving rise to trigger spots of pain due to impaired resting circulation. The pain remains even after original cause is removed and is farthest away from source. Forward head posture pulls mandible towards maxilla decreasing freeway space, shortening suprahyoid muscles, and stretching infrahyoid muscles creating tension in muscles of mastication leading to bruxism and attrition of teeth. It is extremely important to evaluate and treat posture simultaneously while treating attrition.

CONCLUSION

Thus by including postural considerations in our diagnosis we can treat the patient in a multidisciplinary collaboration and care for overall health and well being of patient. It is an ethical obligation to acknowledge connection of occlusion to TMJ disorders, Myofascial pain, Musculoskeletal pain within our scope of care to eliminate pathologic influences of occlusal signalling. Prudent referral to Psychiatrists, Physiotherapist, Chiropractors, Osteopathic Physicians and Sacral-occipital Therapists should be the part of team approach to help treat and rule out pathologies out of scope of dentists. Even more extensive studies can be carried out in this field and holistic approach adopted for overall wellbeing of our patients..

CONFLICT OF INTEREST & SOURCE OF FUNDING

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