ORIGINAL RESEARCH PAPER

General Medicine

TMJ DISORDERS IN COMPETITIVE SWIMMERS AND EFFECT OF COMMON ANALGESICS FOR ITS TREATMENT

KEY WORDS: TMJ, TMD, Competitive, Swimmers

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ABSTRACT

Swimmers push their body to the limits of the functions so normal variations in anatomy or biomechanics and poor technique may lead to overuse injuries and micro trauma. The most common swimming injuries are shoulder, neck and back. The prevalence of musculoskeletal injuries in competitive swimmers is, shoulder 37%, knee 28%, spine 22% and foot and ankle is 19%. Limited number of studies are available to find out the prevalence of TMJ disorders in competitive swimmers. This study puts in an effort to find the same. And also the commonest effective way of treatment for the same.

INTRODUCTION:

Temporomandibular joint (TMJ) is complex junction. It consists of three articular surface mandibular fossa, articular tubercle and head of the mandible[1,2,3]. Eustachian tube dysfunction and dizzy spells. The predisposing factors are joint laxity, anatomical variations, capsular or muscular inflammation, repetitive motion and static articular stress.[4,5]

Swimmers push their body to the limits of the functions so normal variations in anatomy or biomechanics and poor technique may lead to overuse injuries and micro trauma. The most common swimming injuries are shoulder, neck and back. The prevalence of musculoskeletal injuries in competitive swimmers is, shoulder 37%, knee 28%, spine 22% and foot and ankle is 19%. Limited number of studies are available to find out the prevalence of TMJ disorders in competitive swimmers. This study puts in an effort to find the same. And also the commonest effective way of treatment for the same.

AIM OF THE STUDY

To find out the prevalence of TMD in competitive swimmers and also to find the effective treatment based on the severity of the disease.

MATERIALS AND METHODOLOGY

Study design: A cross sectional study

Study population: competitive swimmers

Study sample size: 30

Study setting: various swimming clubs in South India.

Study duration: April 2008- May 2009

Swimming clubs in South India will be contacted and approached. This will be followed by distribution and selection of swimmers using screening form. If the swimmers met with the selection criteria they will be included our study followed by informed consent will be obtained prior to voluntary participation in the study. If the swimmers present with any TMJ pain or discomfort it will be further assessed according to the RDC/TMD criteria to confirm the diagnosis. Then the data will be used for further analysis.

The data will be collected and all the variables and its characteristics will be described using tables and graphs. All data will be coded and entered in to the software SPSS version 16.0 (statistical package for social sciences) in windows. Descriptive analysis will be done by finding mean and standard deviation of all the samples. The Chi-square test will be used for the analysis of data.

OBSERVATION AND RESULTS:

Figure 1: Age Distribution

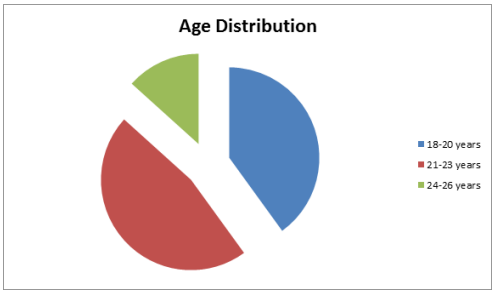


Figure 2: Male and Female Prevalence

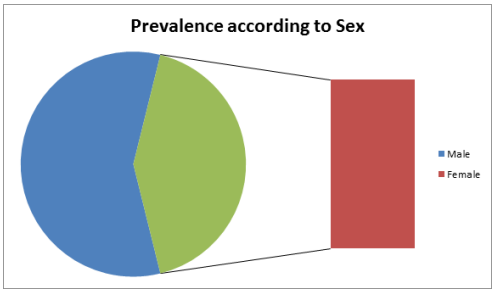
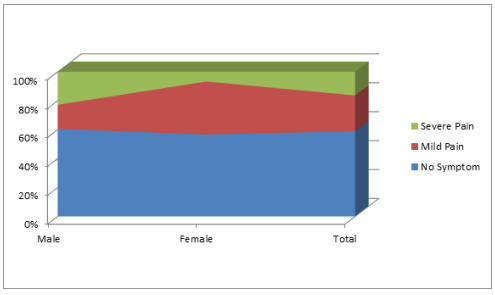
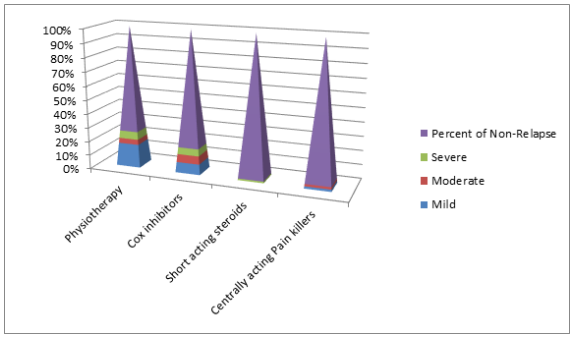


Figure 3: Severity



Graph 4: Treatment



DISCUSSION:

Mouth breathing is an important contributing factor. Breathing through the mouth facilitate forward head posture and a low and forward tongue position.[6,7,8]

During swimming nasal breathing is left and mostly favor of an oro-nasal respiration. That leads to less or more mandibular movements with variation of supra and infra hyoid muscle, and of cervico-brachial muscle and their variation can leads to alternative of position of teeth and bone bases and may develop dental mal occlusion, dysfunction of temporomandibular joint intra or extra capsular type.[9,10,11]

Other predisposing factors that may cause TMD is variety of neurological and muscular disorder, bone diseases, tumors, infections, psychogenic disorder, disease causing disturbance of the occlusion of the teeth or supporting structures, faulty habits of the jaw, and orofacial imbalance.[9,11]

CONCLUSION:

The prevalence of the TMD is high in professional swimmers. It needs a case control or cohort study for further proofs so as to take necessary steps to decrease the detrimental effects.

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