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RESEARCH ARTICLE

PREVALENCE OF DIAGNOSED TEMPOROMANDIBULAR DISORDERS IN CENTRAL KERALITE POPULATION- A CROSS SECTIONAL STUDY

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Abstract

Aim: To investigate the prevalence of TMD in Central Keralite population.

Materials and Methods: A representative population-based sample of 368 people was randomly selected of which 152 were men and 216 were females. A cross sectional study was conducted in both males and females aged 18-65 years. TMD prevalence was assessed by self-reported questionnaire. The diagnosis of TMD was based on Research Diagnosis Criteria for TMD (RDC-TMD) Axis1.

Results: Of the total sample size selected, 51.35% had TMD. Of this, 53.2% of the females and 48.6% of the males were diagnosed to have TMD. TMD patients were categorised according to RDC TMD Criteria. In Category I (Myofascial pain dysfunction) - 47%, Category II (Internal derangement) - 51% and in Category III (Inflammatory Joint Disorder) - 2%

Conclusion: The present study indicates that more than half of the general population in Central Kerala is affected by TMD. Proper awareness of this disorder and possible treatment options should be well informed to the general population.

Introduction:-

Temporomandibular disorder (TMD) embraces a cluster of conditions involving masticatory muscles, temporomandibular joints and associated structures[1]. TMD is considered as the second most common musculoskeletal problem after backache[2]. TMD represent a significant public health problem as it affects a large portion of the population. 50-75% of the general population has at least one sign of TMD and 33% have at least one symptom[3-5]. Common signs and symptoms of TMD are TMJ sounds, limitation on mandibular movements, tenderness in relation to TMJ, masticatory muscles or associated structures, restricted mouth opening etc. The TMD pain can also radiate to adjacent structures such as teeth, ears, neck, head and back muscles[6-11].

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Etiology of TMD has been considered as multifactorial and may be related to psychological stress, occlusal discrepancies, mal-positioning and loss of teeth especially in the posterior region, masticatory muscle dysfunction, TMJ structural incompatibility, postural changes, habits and or combination of such factors[12-15].

The usual TMD clinical presentations can generally fall into three main categories (RDC-TMD)[16]

1. Myofacial pain dysfunction involving pain or tenderness in masticatory muscles.
2. Internal derangement (disc interference) of TMJ involving anterior displacement of disc with or without auto reduction.
3. Arthritis represents a group of inflammatory or degenerative joint disorders.

Only few epidemiological studies of TMD were published in regard to Indian population and moreover there has not been any published article on TMD epidemiology in relation to general Keralite population. So, the aim of the present study is to investigate the prevalence of TMD in Central Keralite population according to Research Diagnostic Criteria for Temporomandibular Joint Disorders (RDC-TMD).

Materials and Methods:-

A cross sectional study was conducted in both males and females aged 18-65 years. A total of 368 people were randomly selectedof which 152 were men and 216 were females. TMD prevalence was assessed by self- reported questionnaire. The Questions examined whether they had any sign or symptom of TMD. The signs or symptoms assessed were,

1. Pain in relation to masticatory muscles
2. Difficulty in opening mouth fully
3. Pain in relation to TMJ
4. Joint Sounds
5. Deviation on opening the mouth
6. Locking of the Joints
7. Difficulty in chewing, talking and using the jaws

The answers were Yes, No or at times.
The diagnosis of TMD was based on Research Diagnosis Criteria for TMD (RDC-TMD) Axis1.

Results:-

Of the total sample size selected 51.35% had TMD. 53.2% of the females and 48.6% of the males were diagnosed to have TMD. Different categories ofTMD patients in this study, according to RDC TMD Criteria (Axis1) are given below.

Category I (Myofascial pain dysfunction) - 47%
Category II (Internal derangement) - 51%
Category III (Inflammatory Joint Disorder) - 2%

Discussion:-

Depending on the dominant etiological factor involved, prevalence has regional variation.

Most of the earlier studies report a strong female preponderance for TMD[17-20]. Some studies found out almost equal distribution of TMD in both males and females[21]. Male preponderance was reported in studies conducted by Lee et al and Kashef K. AlShaban and Zainab Gul Abdul Waheed[22,23].

In the present study, females had only slight increase in TMD compared to males. It denotes that TMD percentage in male community is almost equal to female counterparts and males should be given equal importance while providing treatment. Hard food and psychological stress may the contributing factors for the increase in the male predominance compared to older studies.

In the present study internal derangement of TMJ has a slightly higher prevalence than myofascial pain disorder. This may be due to non-painful clicking and deviation in general population.

Conclusion:-

The epidemiological data has paramount importance as this data paves the pathway in establishing prevention or control of a particular disease.The present study clearly indicates that more than half of the general population is affected by TMD. Awareness of this disorder, ways to reduce the aggravating factors and the importance of seeking treatment in the acute stage itself should be well educated to the general population.

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