Awareness of Dentists Regarding Role of Physiotherapy in Managing Temporomandibular Joint Dysfunction

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ABSTRACT:

Background: Temporomandibular joint disorder (TMD) is a complex disorder usually characterized by pain, crepitus and reduced movement. It may be due to various causes i.e. unbalanced activity, muscular spasm, or overuse of the jaw muscles,

Objective: - The aim of our study is to find the awareness level of physiotherapy among dentists regarding its role in TMD.

Methodology: A Descriptive case series was conducted in FMH (Dentistry department) and different private dental clinics in Shadman Lahore. A convenient base sample of 100 respondents has been collected in 1 month.

Results: In our study 65% dentist did not consider physiotherapy as a treatment option for TMD, while 27% considered that it may be a treatment option and only 8% considered it as a treatment option. Association of dentists' awareness level of physiotherapy as a treatment for TMD found to be significantly low p=0.0001 in our study. Treatment choice of most dentists was using a combination of medications and precautions (64%) while only 7% of dentist referred patients with TMD for physiotherapy. According to our study, most common complaints of patients to dentists were pain during eating and yawing (52%) followed by Crepitus/Clicking (30.0%) as the second most common complaint. According to our study results, 40% dentists prescribed muscle relaxants and rest as a most effective treatment for TMD.

Conclusion: TMD is a problem requiring multiple remedies for symptoms relief. Medications alone are unable to give satisfactory results in relieving all the symptoms of TMJ dysfunction. Physiotherapy is an effective mean of symptoms' relief yet awareness level is found to be significantly low in dentists regarding its effectiveness.

Key Words: Temporomandibular Joint, Dentist, Physiotherapy

INTRODUCTION:

Temporomandibular joint disorder (TMD) is a complex disorder usually characterized by pain, crepitus and reduced movement. It may be due to various causes i.e. unbalanced activity, muscular spasm, or overuse of the jaw muscles etc. It ultimately leads to difficulty in mouth activities (1). Macfarlane TV et al in one survey of adults in the United Kingdom found the prevalence of orofacial pain to be 26 percent out of which only 6 percent reported discomfort in the Temporomandibular joint (TMJ) (2). TMD prevalence could not be exclusively related to sustain mouth opening attained during dental procedures. Tomas Magnusson et al.'s prospective study's results showed that orthodontic treatment did not run a higher risk of developing TMD later in life (3). Bora Bagis et al in a cross sectional study found a higher prevalence of TMD in females. They also found significant effects of age (p=0.006) and missing teeth (p=0.003) along the prevalence of TMD (4).

TMD symptoms vary according to the severity of the problem. Goran Agerberg et al in their study on the prevalence of symptoms of TMD found that joint clicking is the commonest symptom or clinical finding in TMD (5). Whereas,Virginia Tuerling et al in a cross sectional survey found that muscle tenderness was positive in 80.9% of patients (6).Johansson et alet al did a cross sectional survey (n= 8,888) in 2002 and found that in TMD, chewing difficulty was present in 61%, joint sounds were present in 28.5% while difficulty in jaw opening was present in 19.4% (7).

Treatment of TMD is mainly based upon severity of symptoms. Treatment may include rest, life style modifications (eating soft foods etc.), analgesics, muscles relaxants; application of ice packs, physiotherapy and etc. In rare cases surgery is needed**.**Physiotherapy plays a major role in the treatment of TMD but there is little published material supporting its efficacy**.**Margaret L McNeely et al in a systematic review found that there were significant improvements in oral opening with physiotherapy(i.e. muscular awareness relaxation therapy, biofeedback training, and low-level laser therapy treatment)in patients with TMD (8). Sherma et al did a cross sectional study to see the awareness of physiotherapy regarding musculoskeletal disorders. They found that self-awareness and benefits of regular exercises was significantly low among them(9).The aim of our study is to find the awareness level of dentists regarding the role of physiotherapy in managing TMD.

METHODOLOGY:

In this descriptive cross sectional survey close ended questionnaire was circulated among dentists from Lahore either working in clinical set-ups, academic institutions or both. Inclusion criteria contained professionals having minimum of one year experience. Dental students, house officers and students doing internships were excluded from this study. Maximum time provided for returning the questionnaire was 1-2 weeks. A convenience based sample of 100 respondents was collected in the period of one month. The data was analyzed through the SPSS version 16.0.

RESULTS:

Treatment choice of most dentists was using a combination of medications and precautions (64%) while only 7% of dentist referred patients with TMD for physio therapy (Table – 1& Fig –1).

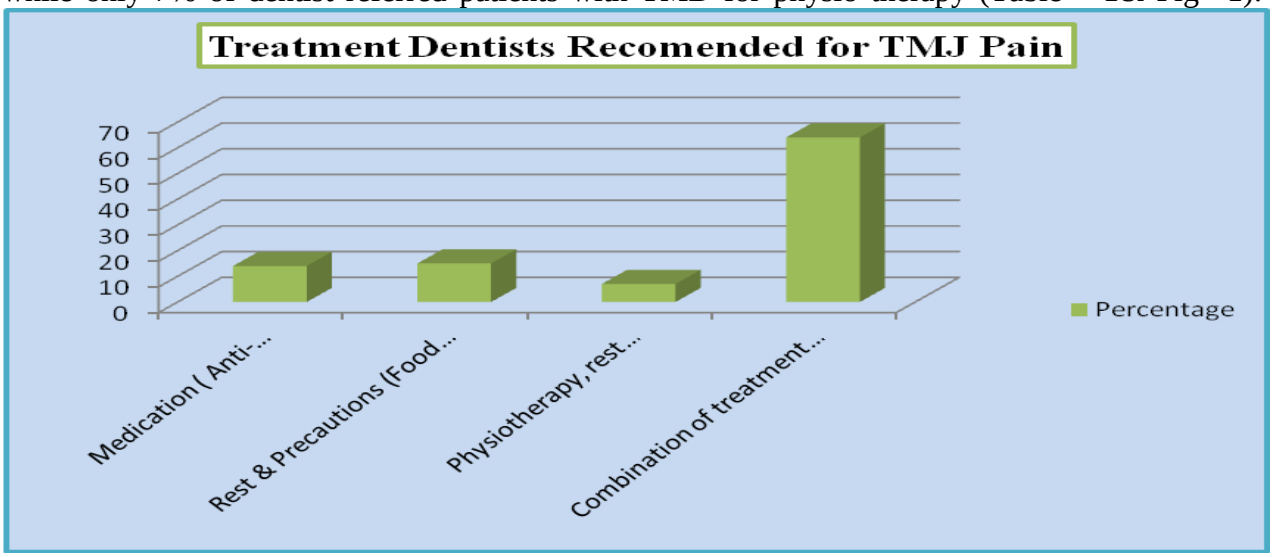

Fig -1:-Treatment Dentists Recommend for TMJ Pain

According to our study, most common complaints of patients to dentists were pain during eating and yawing (52%) followed by Crepitus/Clicking (30.0%) as the second most common complaint (Table -2 & Fig – 2).

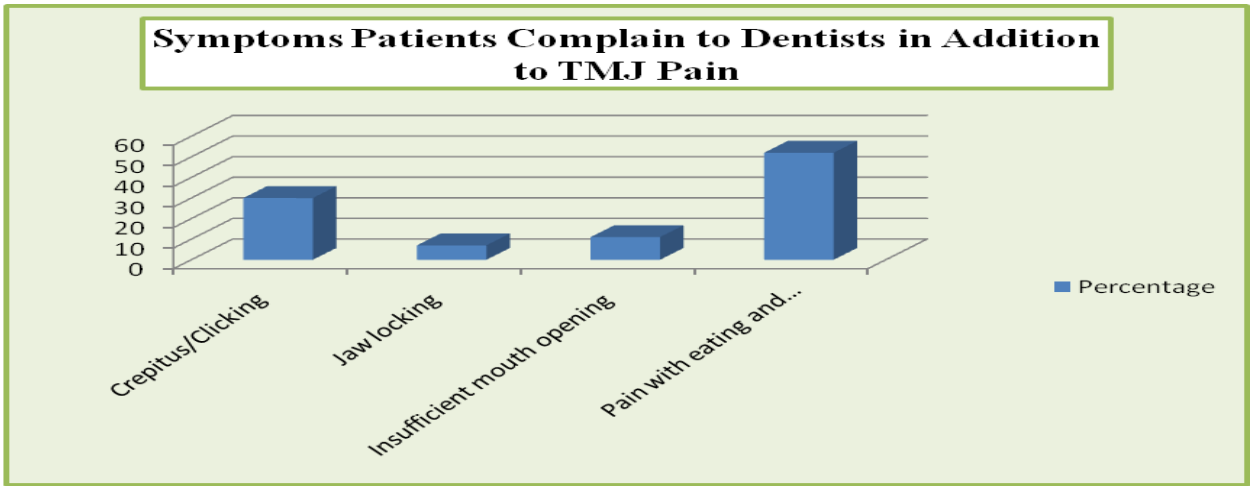

Fig -2:- Symptoms Patients Complain to Dentists in Addition to TMJ Pain.

According to 40% dentists muscle relaxants and rest were most effective treatments for TMD (Table - 3 & Fig – 3).

Fig 3: Dentists' Perception of Effective Treatment for TMD.

In our study 65% dentist did not consider physiotherapy as a treatment option for TMD, while 27% considered that it may be a treatment option and only 8% considered it as a treatment option. Association of dentists' awareness level of physiotherapy as a treatment for TMD found to be significantly low p=0.0001 in our study (Table -4 & Fig -4).

Sr.	Dentists' awareness of Physiotherapy	Frequency	Percentage	Valid Percentage	Cumulative Percentage	P value
1.	Yes	8	8.0	8.0	8.0	
2.	No	65	65.0	65.0	73.0	
3.	May be	27	27.0	27.0	100.0	
	Total	100	100.0	100.0	100.0	
						P=0.0001

Table -4:- Dentists' Awareness of Physiotherapy as Treatment for TMD

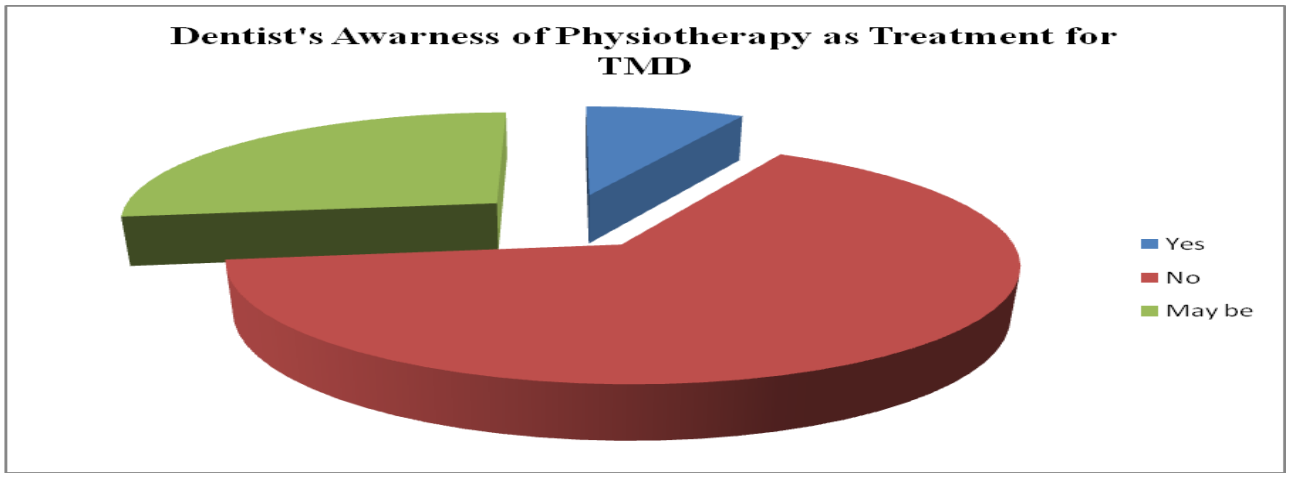

Fig -4:- Dentists' Awareness of Physiotherapy as Treatment for TMD

DISCUSSIONS:

Mainstays of dentists recommended treatment for TMJ syndrome are NSAIDs and benzodiazepines. Patients eventually may require tricyclics, opioids, muscle relaxants, or steroid (intra-articular) therapy for protracted pain syndromes. Physiotherapy is very effective in TMD but its awareness level is very low which remains to be the main hurdle in patient referral towards Physiotherapy.

According to our study's results, treatment choice of most dentists was consistent of a combination of remedies including medications and precautions (64%) while only 7% of dentist referred TMJ patients for Physiotherapy.

S. M. Gordon DDS et al in his study found that naproxen was better for TMD pain as compared to other NASIDs. On the bases of this he concluded that NASIDs may be useful for short-term goals (i.e. pain relief) (10). Luo Liang et al. in RCT compared therapeutic effects of acupuncture plus ultra sound therapy and oral administration of western medicine on temporomandibular disorders (TMD)**.** They found significant improvement ($p<0.05$) in experimental group (US+ Acupuncture) (11). List et al did a systematic review of RCTs to assess the pain-relieving effect and safety of pharmacologic interventions in the treatment of chronic temporomandibular disorders (TMD). They found that use of analgesics in TMJ pain was not supported by evidence (12). Jeans C Turp et al. in a systematic review found that multimodal management is more effective in TMD (13).

On the basis these researches, analgesics alone are not effective in treating TMJ pain although it is the most frequently prescribed treatment option among dentists'.

According to our study, most common complaints of patients to dentists were pain during eating and yawing (52%) followed by Crepitus/Clicking (30.0%) as the second most common complaint. My results were consistent with Johansson et al. cross sectional survey of (n= 8,888) in 2002 where they found that in TMD chewing difficulty was present in 61% cases, joint sounds was present in 28.5% cases and difficulty in jaw opening was present in 19.4% cases (7). Pain during eating and yawing could be indirectly linked with occlusal muscle tightness. Virginia Tuerling et al's cross sectional survey found that muscle was positive in 80.9% of patients having TMD (14).Our study's results were close to this study while the difference may be due to the sample size variation of both studies.

According to our study results, 40% dentists prescribed muscle relaxants and rest as most effective treatments for TMD. Many researches had proven the efficacy of this finding i.e. Hermen et al in a RCT compare the relative effectiveness of a benzodiazepine (clonazepam), a muscle relaxant (cyclobenzaprine), and a placebo for the treatment of jaw pain. They found that Muscle relaxant (cyclobenzaprine) was statistically superior to either placebo or clonazepam when added to self-care and education for the management of jaw pain (15).

In our study 65% dentist did not consider physiotherapy as a treatment option for TMD, while 27% considered that it may be a treatment option and only 8% considered it as a treatment option. Association of dentists' awareness level of physiotherapy as a treatment for TMD found to be significantly low p=0.0001 in our study. Sherma et al did a cross sectional study to see the awareness of Physiotherapy regarding musculoskeletal disorders among Dentists'. They found that self-awareness and benefits of regular exercises was significantly low among them (8).

CONCLUSION:

TMD is a problem requiring multiple remedies for symptoms relief. Medications alone are unable to give satisfactory results in relieving all the symptoms of TMJ dysfunction. Physiotherapy is an effective mean of symptoms' relief yet awareness level is found to be significantly low in dentists regarding its effectiveness.

RECOMMENDATIONS:

Further studies with increased sample size in different cities are required to see the physiotherapy treatment's effectiveness' awareness level and factors responsible for the lack of awareness level among dentists.

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