

Prevalence of Orofacial Pain Symptoms and the Impact on Quality of Life among Patients Attending Khartoum Teaching Dental Hospital

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Abstract -

Background: Orofacial pain is a common presentation in general population, dental origin represents most common cause of OFP and have a significant social and economic consequences on individual and communities, in this study we report prevalence of OFP symptoms and the impact on quality of life among Sudanese patients.

Method: Cross-sectional, descriptive, analytical hospital base study at Khartoum Teaching Dental hospital (25th of Aug 2020-17th of Sept 2020), data collected using questionnaire filled as interview style; to determine clinical diagnosis and grade of disability.

Results: The most common OFP was toothache (58.2%) followed by TMJ and muscle pain (17.8%) and least was neuralgic pain (4.3%), grade 2 disability was most predominant while grade 1 was least, females has higher mean pain intensity than males, neuralgic pain showed highest mean pain of intensity.

Recommendations: We recommend to increase level of dental awareness through different social media means, availability and affordability of dental treatment and care about school dental health and routine dental examination

Key words: Temporomandibular joint Dysfunction Syndrome, Orofacial pain.

I. INTRODUCTION

Orofacial pain is a common presentation in general population with prevalence up to 26 %. According to clinical presentation it could be either from odontogenic origin which resulting from dental caries and sequels of pulpal diseases are the most common cause of pain in the orofacial region, other causes include diseases of the periodontium, teeth with wasting diseases (e.g. erosion, attrition and abfraction), and cracked teeth. Or it could be from non-odontogenic origin which include temporomandibular joint diseases, trigeminal neuralgia with incidence up to 4 to 5 per 100,000 per year, and post-herpetic neuralgia, seen in up to 30 % of elderly patients with herpes zoster. Pain secondary to oral mucosal lesions, sino-nasal diseases, psychosomatic causes, and cardiac toothache(1).

Pain is the most common symptom of oral and dental

diseases, it is a complex phenomenon, associated with real suffering and discomfort; hence it is subjective(2).

Pain of dental origin is a major public health problem that can have significant impact on the everyday quality of life; so utilization of the dental health care services is mandatory to help in solving this problem(2).

Oral and dental pain can have social, psychological and economic consequences on individuals and communities(3).

When chronic pain left untreated or improper treatment could lead to increased disability, risk of depression and sleep deprivation which reduce quality of life and even social isolation(4).

Symptoms of Orofacial pain associated with significant disability and impact on psychological distress and quality of life(5).

The conditions involving chronic orofacial pain represent a major health problem, and patients with persistent pain are difficult to manage successfully(6).

With documented high prevalence of orofacial pain worldwide and the major impact on community and individual quality of life, in addition to absence of previous study and local guidance of management in Sudan, the need for this study was arised.

II. MATERIALS AND METHODS

A descriptive Cross-Sectional hospital based study was conducted at (KTDH) at Khartoum state for patients with orofacial pain, who presented to outpatient clinic during the study period From 25th of August 2020 to 13th of September 2020. Data collected through designed questionnaire filled in an interview style, contain the socio-demographic data as well as the clinical information and questions demonstrating disability (modified Questionnaire of Von Korff et al for Grading the Severity of Chronic Pain)(7), all data were analyzed statistically using (SPSS) program For all tests a P - value was set at (0.05) level, with 95% confidence interval. **Ethical Considerations:** A

letter of permission from (SMSB) to conduct the study had been sent to (KTDH). Information was treated with confidentiality and no patient name was mentioned.

Number of patients was two hundred and eight.

III. RESULTS

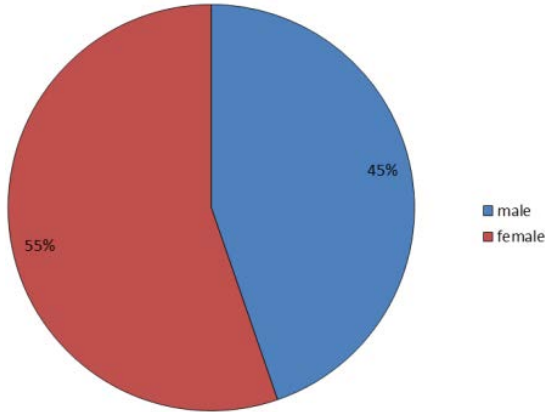


Figure (1) the distribution of the study participants according to their gender. Participants according to marital status

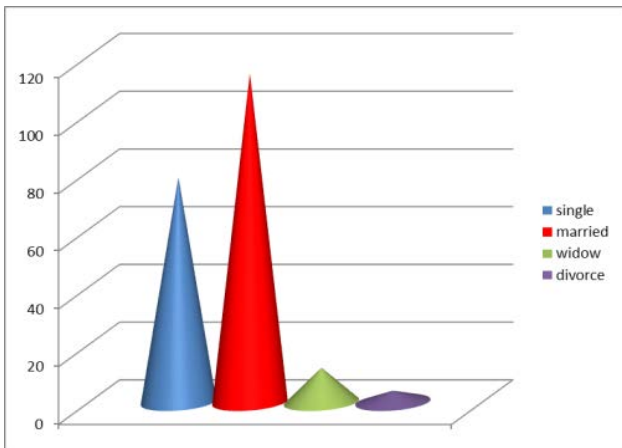


Figure (2) the distribution of the study participants according to their job provider.

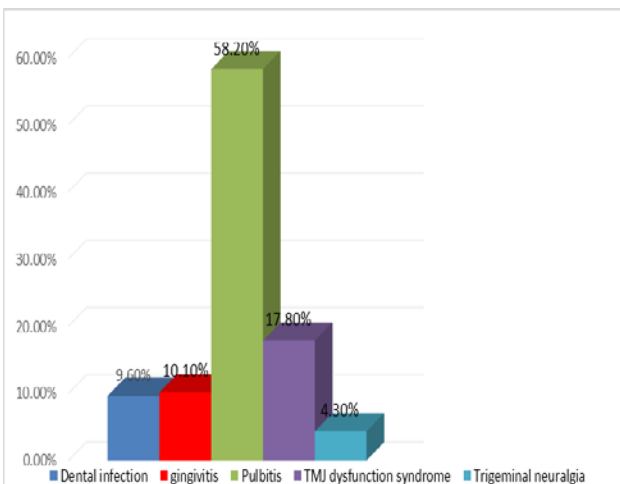


Figure (3) the distribution of the study participants according to their job provider.

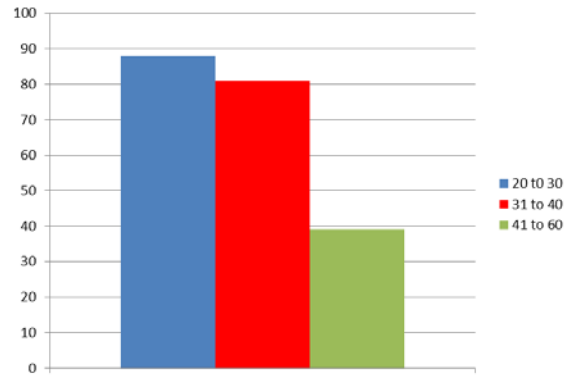


Figure (5): the distribution of the study participants according to their age in years.

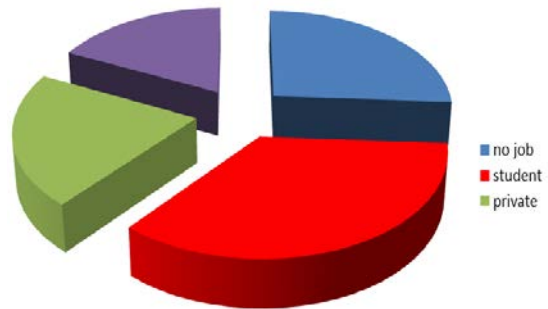


Figure (6): the distribution of the study participants according to chronicity of the pain.

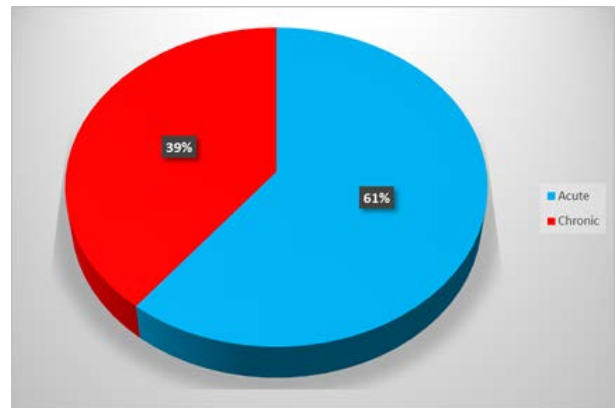


Figure (7): The distribution of the study participants according to grade of disability.

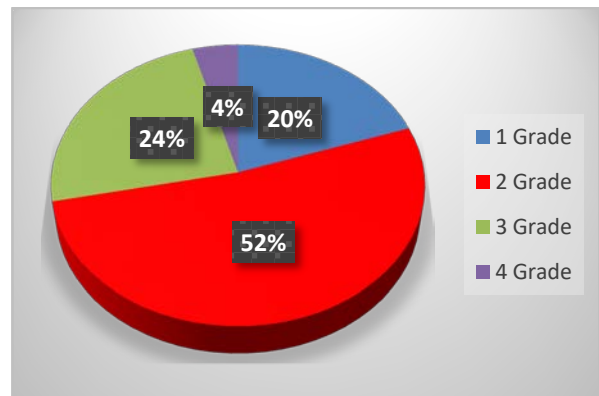


Figure (8): The distribution of the study participants according to grade of disability among different gender.

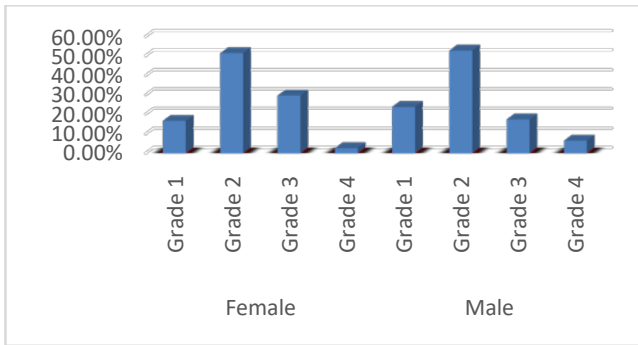


Figure (9): Age Group and Diagnosis.

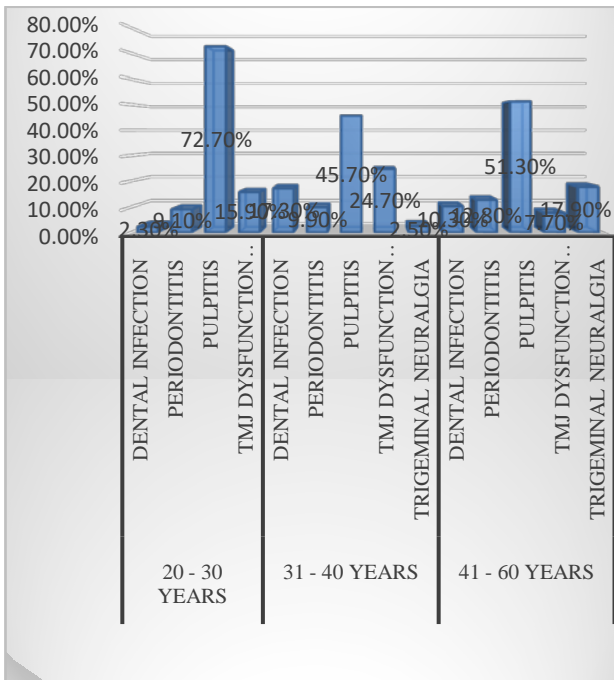


Table (1): Diagnosis/Mean of Pain Intensity.

Diagnosis	Mean of Pain Intensity
Dental Infection	13.3000
Gingivitis	8.6667
Pulpitis	11.3430
TMJ-Dysfunction Syndrome	8.6486
Trigeminal-Neuralgia	17.1111

Table (2): Diagnosis and Grades of disability

Diagnosis	Grade 1	Grade 2	Grade 3	Grade 4
Dental infection	0(0%)	1(5%)	13 (65%)	6(30%)
Gingivitis	11 (52.4%)	9 (42.9%)	1 (4.8%)	0 (0%)
Pulpitis(t oothace)	16 (13.2%)	78 (64.5%)	24 (19.8%)	3 (2.5%)
TMDS	14 (37.8%)	19 (51.4%)	4 (10.8%)	0 (0%)
Trigeminal	0(0%)	1(11.1%)	8(88.9%)	0(0%)

neuralgia				
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Table (3): Mean of Pain Intensity/Gender and Acute or Chronic

Gender	Mean of Pain Intensity
Female	11.4913
Male	10.4624
Acute or Chronic	
Acute	12.5119
Chronic	8.7561

Table (4): Job provider and grades of disability.

		Grade of Disability				Total
		1.00	2.00	3.00	4.00	
Job provider	Private	11	25	8	0	44
	Governmental	10	16	8	3	37
	Student	11	40	19	3	73
	no job	9	27	15	3	54
Total		41	108	50	9	208

P value 0.52

IV. DISCUSSION

Orofacial pain is one of major health problems, many studies constructed about the prevalence of it showed that about one third of population are affected (1), and has negative effects on communities 3.in this study we reported the prevalence of orofacial pain symptoms among Sudanese patients attending **KTDH** who were main complaint was pain and assess the negative effects of these symptoms on their quality of life through simple designed questionnaire.

The prevalence of the orofacial pain symptoms in the present study showed that toothache (58.2 %) was the most common symptom followed by TMJ and muscles pain (17.8 %), gingivitis(gum pain)(10.1%) dental infection (9.6%)and neuralgic pain (suspected trigeminal neuralgia) (4.3 %).

This was quite similar to the study by S.S Oberoi et al.(2)their study showed that toothache (57.6 %) was the most common symptom followed by TMJ pain (14.8 %), neuralgic pain (13.2 %), oral sores (8 %) and burning mouth (6.4 %);absence of oral sores from this study indicates decrease of medical education or using ofover countered medications and traditional treatment.

This was also similar to the study conducted by Wan KY et al. (5) in which toothache was the most commonly reported symptom (62.0 %) and burning sensation in the tongue was least common (0.5 %).

This also similar to study conducted by Orapin V et al.(8)where they found the most prevalent pain locations

were dentoalveolar (teeth) and musculoligamentous tissues (joint pain), but differ at that The prevalence of dentoalveolar pain decreased with age; where in this study the percentage of toothache was most common among all age groups; this could be due to affordability of dental care or desensitization with aging process.

The possible explanations that pulpal pain is very severe in nature that usually interfere with sleep and not relieved by analgesics specially when in an acute attacks; therefore patients cannot tolerate it and seeking for treatment more than other conditions of pain.

In present study sex significantly affected the prevalence of temporomandibular-joint and muscles pain(musculoligamentous);females more frequently affected; this is quite similar to study done by Orapin V et al. (8)where females were more frequently affected by TMJ pain; the possible explanations that is due to high psychological stresses to females and they more sensitive to pain, or males has more tolerance to pain.

In contrast to study done by S.S Oberoi et al. (2)where is pain related to the TMJ region had higher prevalence among males in comparison to the females ;the possible explanation that may be there is ethnic effect due to difference in population where study was constructed.

In present study there was high number of patients those presented by dental infection (9.6%) and periodontal diseases (10.1%) revealed that there is a little or no dental education and services availability and affordability at study area.

In the present study, higher mean pain intensity scores were found in the patients with neuralgic pain (suspected trigeminal neuralgia) (17.1) and dental infection (13.3) in comparison to the patients with tooth pain (11.34), TMJ dysfunction syndrome (joint pain)(8.64) and gingivitis(gum pain) (8.66). This was quite similar to the study done by Sukhvinder S Oberoi et al (2).Whereas patients with neuralgic pain demonstrate higher intensity of pain and patients with toothache demonstrate lowest intensity; that is because there is no presented subjects with periodontal problem; the possible explanations are due to regular checkup and high dental educational level, patients whose complain of periodontal problems demonstrated low pain intensity and chronic nature of periodontal diseases.

In this study grade 2 and grade 3 level of disability pain was reported with all the orofacial pain symptoms. High disability (grades 3 and 4 level of pain) was reported for patients with patients of neuralgic pain (suspected trigeminal neuralgia) and dental infections (abscess), where grade 1 (low disability) was reported with periodontal diseases and joint pain (TMJ dysfunction).

This similar to study of Sukhvinder S Oberoi et al.(2)where

the grade 2 and grade 3 level of disability was reported with all presented orofacial symptoms , grade 3 and 4 (high disability) reported with face(neuralgic) pain and burning mouth syndrome; possible explanation is due to neuropathic nature of these types of pain symptoms.

Differ in that grade 3 and 4 disability also reported with joint pain; which may be due to high demands of population at study area or early presentation of disease.

In this study there is females have a higher mean of pain intensity than males, similar to study of S.S Oberoi et al.(2)Where females demonstrated higher mean pain intensity than males ;females more sensitive and emotional.

In this study facial pain (suspected trigeminal neuralgia) showed maximum mean pain intensity, this similar to study of S.S Oberoi et al. (2)where the facial pain and burning mouth sensation showed the maximum mean pain intensity; due to neuropathic nature of these types of pain.

In this study there is no significant association between job provider and the grade of disability; possible explanation that job provider could affect type of pain but not nature of the pain.

In the present study we found that Acute pain was more common than chronic one; this due to high intensity nature of acute episodes of pain thus patients with acute pain seeking for treatment more than patients with chronic one.

V. CONCLUSION

There was significant impact on the people with orofacial pain which leads to discomfort and disability.

There are different causes of orofacial pain started from simple causes e.g.: caries and periodontal diseases till the most complicated psychological problems that cause most complicated and chronic pain that very difficult to manage.

In this study results showed the most common presented orofacial pain symptoms was toothache and it's squeal (dental infection)which has the higher level of disability .

The main causes of tooth decay are lack of dental awareness and knowledge about oral health, also fear from dentist and decrease in availability of dental services may play a role.

Dental treatment is expensive; so availability and affordability of dental service through medical insurance is mandatory for help to solve the problem.

Disability and discomfort from orofacial pain results in negative impact on community through decreasing of income and effect on study of students.

VI. FUTURE SCOPES

Since there is not enough researches studying orofacial pain

and its impact especially in the Sudanese, further researches and studies is mandatory. Increase the awareness of orofacial pain among health care providers and through community by different methods like social media, may decrease the impact of pain in patient. Distribution of dental health care services in school and insurance centers may facilitate early diagnosis, intervention, treatment. Also there is need for development of local orofacial pain management protocol.

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