

Trigeminal neuralgia diagnosis - a challenge - a cross-sectional survey to assess the knowledge and attitude among the dentists of Saudi Arabia

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Abstract

Objective: To analyse the knowledge level and attitude of Saudi dentists regarding trigeminal neuralgia.

Method: The cross-sectional study was conducted from 17/12/2020 - 9/2/2021 at Prince Sattam Bin Abdulaziz University, Al-Kharj, Riyadh Elm University, Riyadh, and Dar Al-Uloom University, Riyadh, Kingdom of Saudi Arabia. The sample comprised dentists and postgraduate dental students from every speciality. Data was collected online using a predesigned self-structured questionnaire consisting of three parts, assessing knowledge, practice and attitude of the subjects. Data was analysed using SPSS 22.

Results: A total of 202 questionnaire about the knowledge level and attitude of Saudi dentists regarding trigeminal neuralgia were completed. The knowledge level was significantly higher in those senior age group compared to the young dentists with respect to the type of pain observed in TN, the unilateral pain of TN, and the abrupt, unexpected and transient nature of TN pain, local anaesthetic, the first-line treatment for TN, and the effect of TN on oral hygiene.

Conclusion: Older and experienced dentists had more knowledge than younger and less experienced ones.

Keywords: Neuralgia, Trigeminal, Trigeminal neuralgias, Tic Doloureux, Fothergill disease, Orofacial pain.

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Introduction

A range of chronic pain affecting the orofacial area is referred to as chronic orofacial pain (OFP), including temporomandibular disorders, trigeminal neuralgia (TN), burning mouth syndrome, and persistent idiopathic facial pain.¹⁻³ TN is one of the most typical causes of facial discomfort seen in dentistry and neurology clinics.

The trigeminal nerve, or the cranial nerve V (CN-V), is the fifth largest cranial nerve, and gets its name from the Greek word 'tri', meaning 'three', which refers to the trigeminal ganglion where it enters from the ventrolateral aspect of the pons.⁴ They split into three main divisions as they leave the ventral side of the ganglion: the Ophthalmic division (CN V1), the Maxillary division, and the sensory component of the Mandibular division.⁴ Constant stabbing pain in the face is a defining feature of TN.¹ Paroxysmal pain may damage one or more trigeminal nerve divisions. Some people may have excruciating pain all the time.⁵ TN shows two variations: secondary TN (STN) and classical TN (CTN). When there is no clinical evidence of a neurological deficit

and there is only a neurovascular compression as the underlying cause, called idiopathic, it is referred to as CTN. The STN classification is designated for patients with TN when major neurological illnesses, like skull deformity, or benign compressions in the posterior fossa have been identified.⁵⁻⁷ Ectopic impulses and ephaptic crosstalk are presumably made possible by demyelination.⁸ Blood vessels, most frequently arteries, impose pressure on, or alter the anatomy of the trigeminal nerve, which results in TN.⁹

Numerous medical and surgical procedures are available.¹⁰ Most patients respond favourably to medicine. First-line therapies include carbamazepine and oxcarbazepine, while second-line therapies include lamotrigine and baclofen. Topiramate, levetiracetam, gabapentin, pregabalin and botulinum toxin-A are examples of substitute therapies. Surgical treatments are available if drugs are no longer working or not being tolerated. The most promising surgical procedures include percutaneous rhizotomies, gamma knife radiosurgery, and microvascular decompression.¹⁰

TN is frequently misdiagnosed as tooth pain or dental pain, leading to referrals to the oral and maxillofacial surgeon.¹¹

A study among German dentists and dental students demonstrated an understanding of interdisciplinary pain treatment and referral among different dental specialties as well as the critical need to include non-dental OFP options for diagnosis and treatment in dental curricula.¹²

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A 2015 study in the Kingdom of Saudi Arabia (KSA) reported that there were three TN categories; idiopathic, classic, and secondary.¹⁰ Magnetic resonance imaging (MRI) scan is the gold standard for diagnosis.¹³

There are two categorisations of TN, according to the International Headache Society (IHS); classical and symptomatic TN. Classical TN has no neurological problems and/or actual disease.^{14,15} On the other hand, symptomatic TN can have neurological deficit and is connected to some primary condition or lesion that has been confirmed positive throughout examination and testing.^{14,15} Dentists should be familiar with the types of pain and complains that different patients may have because people with OFP tend to go for multiple consultations until, finally, they get referred to some OFP specialist. It has been shown that dentists in KSA can differentiate between odontogenic and non-odontogenic pain.¹⁶ Nevertheless, their knowledge about disease classification and prescribing medicine was doubtful, as was the case with information related to psychogenic disorders and TN. Dentists usually were afraid to treat patients complaining of neuropathic or neurovascular pain because they were considered difficult to deal with, and they did not feel confident about having enough information on how to treat the patients.¹⁶

Till date clinical examination is the way to diagnose TN.¹⁷ Direct percussion on teeth or the use of hot or cold diagnostic tools that may cause pain in teeth to be elevated is identified as odontogenic, while in TN, pain diverges towards the ears or the eyes.¹⁷ A differentiating trait between dental pain and TN is that toothache can influence sleep pattern, while TN does not affect sleep.¹⁷ Furthermore, electric shock-like pain is not generally reported by patients, but such pain was reported by 29% TN patients. To differentiate between the origin of the pain exactly, an intra ligamentary injection can be applied to the tooth; if the patient reports reduced pain, the origin is odontogenic, and if no change is reported, the origin is taken to be non-odontogenic. It must be kept in mind that local anaesthesia can anaesthetise more than one tooth.¹⁴ A light touch to the area of the face where the trigeminal nerve runs through can cause pain. Everyday activities, like eating, conversing, getting fresh air, cleaning one's face, shaving, and brushing one's teeth, are affected. Because of how this illness affects daily living, some individuals may fall into clinical depression and may attempt suicide.

With a 3:1 ratio, females are more affected than males. The age range that is affected the most is 37-67 years. The trigeminal nerve's mandibular and maxillary divisions are most severely affected.¹⁸

The current study was planned to analyse the knowledge

level and attitude of dentists in KSA regarding TN.

Subjects and Methods

The cross-sectional study was conducted from 17/12/2020 - 9/2/2021 at Prince Sattam bin Abdulaziz University, Al-Kharj, Riyadh Elm University, Riyadh, and Dar Al-Uloom University, Riyadh, KSA.

After approval from the ethics review committee of the College of Dentistry, Dar Al-Uloom University, Riyadh, the sample was raised. Those included were dentists and postgraduate dental students from every speciality. Those not willing to participate were excluded.

Data was collected online using a predesigned self-structured questionnaire consisting of three parts, assessing knowledge, practice, and attitude of the subjects. The survey questionnaire was validated through a pilot study with 42 participants.

The questionnaires were collected by dentists at Dar Al-Uloom University, and confidentiality was maintained. Incomplete questionnaires were returned to the participants to encourage completion, but questionnaires remaining incomplete finally were excluded from analyses.

Data was analysed using SPSS 22. Chi-square test was used for comparisons. $P < 0.05$ was considered significant.

Sampling technique

Single Proportion - Relative Precision

Expected Proportion = 0.67

Relative Precision (%) = 5

Desired confidence level (%) = 95

Required sample size = 757

Confidence Level (%)

90

95

99

Sample Size (n)

Sample size was calculated by the following formula:¹⁹

Expected Proportion = 0.67

Relative Precision (%) = 10

Desired confidence level (%) = 95

Required sample size = 189

Confidence Level (%)

Sample Size (n) 132

This provided the result as 132

Note: Considering the Expected proportion of 0.67 (67%) from the pilot study / Parent article and the relative precision of 5% & Confidence level of 95% the calculated sample size was 757.

OR

Considering the Expected proportion of 0.67 (67%) from the pilot study / Parent article and the relative precision of 10% & Confidence level of 95% the calculated sample size was 189.

Results

There were 202 dental practitioners, with 143(70.8%) age <30 years, 42(20.8%) aged 30-39 years, and 17(8.4%) aged 40 years or more. Most participants were dental interns 194(96%), followed by oral maxillofacial surgeons 6(3%) and oral medicine specialists 2(1%).

The knowledge level was significantly higher in those senior age group compared to the young dentists with respect to the type of pain observed in TN, the unilateral pain of TN, and the abrupt, unexpected, and transient nature of TN pain, local anaesthetic, the first-line treatment for TN, and the effect of TN on oral hygiene ($p < 0.05$).

Knowledge related to the relationship between TN and pain caused by neck muscle disorders, the loss of sensation in TN patients, and the course of pain was higher among those aged 30-39-years than in the other age groups ($p < 0.05$).

Those aged <30 years had a significantly greater understanding of the optimal imaging technique for TN diagnosis and the variability of pain $p < 0.05$.

Further, 168(83%) of those aged 30-39 years, 115(57%) of those aged <30 years, and 155(77%) of the senior age group believed that their knowledge of TN was insufficient.

There was a significant increase in knowledge level in direct proportion to the years of professional experience, except for the knowledge related to the optimal imaging technique for TN diagnosis and the duration of paroxysm, which was significantly better among those <5 years of experience (Table 1).

There was a significant difference between the knowledge level with respect to the field of the practitioners (Table 2).

Table-1: Knowledge and attitude in relation to the professional experience of the subjects.

| | Experience (years) In (%) | | | χ^2 value | p-value |
|--|---------------------------|------------|------------|----------------|---------|
| | <5 | >10 | 5-10 | | |
| <i>Are you able to differentiate odontogenic pain from non-odontogenic pain?</i> | | | | | |
| I don't know | 12 (9.00) | 0 (0) | 0 (0) | 13.81 | 0.008* |
| No | 15 (11.30) | 0 (0) | 1 (2.70) | | |
| Yes | 106 (79.70) | 32 (100) | 36 (97.30) | | |
| <i>If you suspect that the patient has orofacial pain, Who would you refer them to ?</i> | | | | | |
| Endodontist | 13 (9.80) | 0 (0) | 4 (10.80) | 57.8 | 0.12 |
| Endodontist, maxillofacial surgery, ENT | 1 (0.80) | 0 (0) | 0 (0) | | |
| Endodontist; Maxillofacial surgery | 1 (0.80) | 0 (0) | 0 (0) | | |
| Endodontist; Maxillofacial surgery; Oral medicine; Periodontist | 1 (0.80) | 0 (0) | 2 (5.40) | | |
| Endodontist; Maxillofacial surgery; Periodontist | 0 (0) | 0 (0) | 1 (2.70) | | |
| Endodontist; Oral medicine | 1 (0.80) | 0 (0) | 0 (0) | | |
| Maxillofacial surgery | 35 (26.30) | 9 (28.10) | 11 (29.70) | | |
| Maxillofacial surgery – Neuropathic | 0 (0) | 1 (3.10) | 0 (0) | | |
| Maxillofacial surgery – Oral medicine | 0 (0) | 0 (0) | 1 (2.70) | | |
| Maxillofacial surgery, oral medicine | 0 (0) | 3 (9.40) | 3 (8.10) | | |
| Maxillofacial surgery; Oral medicine | 21 (15.80) | 3 (9.40) | 4 (10.80) | | |
| Maxillofacial surgery; Other | 1 (0.80) | 0 (0) | 0 (0) | | |
| Neurologist | 0 (0) | 0 (0) | 1 (2.70) | | |
| Oral medicine | 53 (39.80) | 13 (40.60) | 9 (24.30) | | |
| Oral medicine, orofacial specialist | 0 (0) | 1 (3.10) | 0 (0) | | |
| Oral medicine; Other | 2 (1.50) | 0 (0) | 0 (0) | | |
| Other | 3 (2.30) | 1 (3.10) | 0 (0) | | |
| Other - Orofacial pain specialist | 1 (0.80) | 0 (0) | 1 (2.70) | | |
| Paediatric dentistry | 0 (0) | 1 (3.10) | 0 (0) | | |
| <i>Is Electric shock like pain, a symptom in TN?</i> | | | | | |
| I don't know | 17 (12.80) | 3 (9.40) | 4 (10.80) | 7.75 | 0.101 |
| No | 4 (3.00) | 4 (12.50) | 5 (13.50) | | |
| Yes | 112 (84.20) | 25 (78.0) | 28 (75.70) | | |
| <i>Is TN pain usually unilateral?</i> | | | | | |
| I don't know | 23 (17.30) | 1 (3.10) | 0 (0) | 13.1 | 0.011* |
| No | 7 (5.30) | 3 (9.40) | 5 (13.50) | | |
| Yes | 103 (77.40) | 28 (87.50) | 32 (86.50) | | |
| <i>Can TN be related to pain caused by neck muscles disorder?</i> | | | | | |
| I don't know | 39 (29.30) | 2 (6.20) | 10 (27.00) | 13.78 | 0.008* |
| No | 37 (27.80) | 19 (59.40) | 14 (37.80) | | |
| Yes | 57 (42.90) | 11 (34.40) | 13 (35.10) | | |
| <i>Can you consider the aggravating factors (e.g. trigger factors or particular trigger zones) in diagnosis?</i> | | | | | |
| I don't know | 37 (27.80) | 3 (9.40) | 4 (10.80) | 9.09 | 0.059 |
| No | 14 (10.50) | 6 (18.80) | 6 (16.20) | | |
| Yes | 82 (61.70) | 23 (87.50) | 27 (73.00) | | |
| <i>Is TN pain sudden and unexpected and short lasting?</i> | | | | | |
| I don't know | 25 (18.80) | 1 (3.10) | 0 (0) | 22.2 | 0.001* |
| No | 18 (13.50) | 9 (28.10) | 15 (40.50) | | |
| Yes | 90 (67.70) | 22 (68.80) | 22 (59.50) | | |
| <i>Pain from TN often can be eliminated by LA (local anaesthesia)?</i> | | | | | |
| I don't know | 39 (29.30) | 1 (3.10) | 3 (8.10) | 16.17 | 0.003* |
| No | 51 (38.30) | 14 (43.80) | 18 (48.60) | | |
| Yes | 43 (32.30) | 17 (53.10) | 16 (43.20) | | |
| <i>What is the best imaging technique used to diagnose TN?</i> | | | | | |
| CT (computed Tomography) | 20 (15.00) | 4 (12.50) | 8 (21.60) | 62.22 | 0.001* |
| I don't know | 0 (0) | 2 (6.20) | 1 (2.70) | | |
| MRI (magnetic Resonance Imaging) | 113 (85.00) | 26 (81.20) | 28 (75.70) | | |
| <i>Is Carbamazepine the drug of choice to treat TN?</i> | | | | | |
| I don't know | 43 (32.30) | 7 (21.90) | 12 (32.40) | 3.43 | 0.487 |
| No | 6 (4.50) | 0 (0) | 1 (2.70) | | |
| Yes | 84 (63.20) | 25 (78.10) | 24 (64.90) | | |
| <i>Are non-steroidal anti-inflammatory drugs (NSAIDs) the first line of treatment in TN?</i> | | | | | |
| I don't know | 38 (28.60) | 4 (12.50) | 9 (24.30) | 8.33 | 0.08 |
| No | 44 (33.10) | 19 (59.40) | 13 (35.10) | | |
| Yes | 51 (38.30) | 9 (28.10) | 15 (40.50) | | |

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Table-1: Continued from previous page.

| | Experience (years) [n (%)] | | | χ^2 value | p-value |
|---|----------------------------|------------|------------|----------------|---------|
| | <5 | >10 | 5-10 | | |
| <i>Is the knowledge obtained during (undergraduate, and postgraduate) enough for diagnosing TN?</i> | | | | | |
| I don't know | 19 (14.30) | 1 (3.10) | 3 (8.10) | 6.32 | 0.176 |
| No | 78 (58.60) | 23 (71.90) | 28 (75.70) | | |
| Yes | 36 (27.10) | 8 (25.00) | 6 (16.20) | | |
| <i>Does oral hygiene gets affected in TN patients?</i> | | | | | |
| I don't know | 30 (22.60) | 3 (9.40) | 3 (8.10) | 13.48 | 0.009* |
| No | 29 (21.80) | 11 (34.40) | 18 (48.60) | | |
| Yes | 74 (55.60) | 18 (56.20) | 16 (43.20) | | |
| <i>Duration of pain</i> | | | | | |
| I don't know | 1 (0.80) | 0 (0) | 0 (0) | 6.57 | 0.16 |
| Long lasting | 40 (30.10) | 15 (46.90) | 18 (48.60) | | |
| Short lasting | 92 (69.20) | 17 (53.10) | 19 (51.40) | | |
| <i>Does the pain radiates to other places?</i> | | | | | |
| I don't know | 30 (22.60) | 2 (6.20) | 6 (16.20) | 11.72 | 0.019* |
| No | 17 (12.80) | 10 (31.20) | 3 (8.10) | | |
| Yes | 86 (64.70) | 20 (62.50) | 28 (75.70) | | |
| <i>Variability of pain</i> | | | | | |
| Definite variation | 68 (51.10) | 12 (37.50) | 16 (43.20) | 37.4 | 0.001* |
| I don't know | 2 (1.50) | 1 (3.10) | 1 (2.70) | | |
| Stereotype (fixed pattern) | 63 (47.40) | 19 (59.40) | 20 (54.10) | | |
| <i>Is there a loss sensation in TN patients?</i> | | | | | |
| I don't know | 61 (45.90) | 5 (15.60) | 5 (13.50) | 23.81 | 0.001* |
| No | 30 (22.60) | 17 (53.10) | 16 (43.20) | | |
| Yes | 42 (31.60) | 10 (31.20) | 16 (43.20) | | |
| <i>Course of pain</i> | | | | | |
| I don't know | 0 (0) | 2 (6.20) | 0 (0) | 46.8 | 0.001* |
| No remission | 16 (12.00) | 1 (3.10) | 0 (0) | | |
| Spontaneous remission | 48 (36.10) | 17 (53.10) | 20 (54.10) | | |
| Sudden pain | 69 (51.90) | 12 (37.50) | 17 (45.90) | | |
| Duration of paroxysms (the recurrence of attacks) | | | | | |
| Continuous | 25 (18.80) | 10 (31.20) | 14 (37.80) | 6.72 | 0.035* |
| Seconds to 2 minutes | 108 (81.20) | 22 (68.80) | 23 (62.20) | | |

TN: Trigeminal neuralgia *Statistical significance set at 0.05; χ^2 value: Chi-Square

Table-2: Knowledge and attitude in relation to specialities of the participating dental practitioners.

| | General Practitioner | Specialty [n (%)] | | χ^2 value | p-value |
|--|----------------------|----------------------------|---------------|----------------|---------|
| | | Oral Maxillofacial surgeon | Oral medicine | | |
| <i>Are you able to differentiate odontogenic pain from non-odontogenic pain?</i> | | | | | |
| I don't know | 12 (6.20) | 0 (0) | 0 (0) | 1.3 | 0.854 |
| No | 16 (8.20) | 0 (0) | 0 (0) | | |
| Yes | 166 (85.60) | 6 (100) | 2 (100) | | |
| <i>If you suspect that the patient has Orofacial pain, Who would you refer them to ?</i> | | | | | |
| Endodontist | 17 (8.80) | 0 (0) | 0 (0) | 42.09 | 0.224 |
| Endodontist, maxillofacial surgery, ENT | 1 (0.50) | 0 (0) | 0 (0) | | |
| Endodontist; Maxillofacial surgery | 1 (0.50) | 0 (0) | 0 (0) | | |
| Endodontist; Maxillofacial surgery; Oral medicine; Periodontist | 3 (1.50) | 0 (0) | 0 (0) | | |
| Endodontist; Maxillofacial surgery; Periodontist | 1 (0.50) | 0 (0) | 0 (0) | | |
| Endodontist; Oral medicine | 1 (0.50) | 0 (0) | 0 (0) | | |
| Maxillofacial surgery | 53 (27.30) | 2 (33.30) | 0 (0) | | |
| Maxillofacial surgery – Neuropathic | 0 (0) | 1 (16.70) | 0 (0) | | |
| Maxillofacial surgery - Oral medicine | 1 (0.50) | 0 (0) | 0 (0) | | |
| Maxillofacial surgery, oral medicine | 5 (2.60) | 1 (16.70) | 0 (0) | | |
| Maxillofacial surgery; Oral medicine | 28 (14.40) | 0 (0) | 0 (0) | | |
| Maxillofacial surgery; Other | 1 (0.50) | 0 (0) | 0 (0) | | |
| Neurologist | 1 (0.50) | 0 (0) | 0 (0) | | |
| Oral medicine | 71 (36.60) | 2 (33.30) | 2 (100) | | |
| Oral medicine, orofacial specialist | 1 (0.50) | 0 (0) | 0 (0) | | |
| Oral medicine; Other | 2 (1.00) | 0 (0) | 0 (0) | | |
| Other | 4 (2.10) | 0 (0) | 0 (0) | | |

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Mean overall knowledge of the sample was 55.23% (Table 3).

Discussion

All types of pains can be alleviated for the moment except for TN in which the affected area might be desensitised, but the pain cannot be relieved, except in cases where the patients are given a nerve block. A common way to diagnose TN is by prescribing carbamazepine and oxcarbazepine drugs and then observing if the reaction is positive or a negative. It has been reported that many TN patients start suffering from pain again gradually, which means that medicine can no longer be used to manage the condition. Consequently, TN patients might show unhealthy oral hygiene due to serious discomfort when brushing the teeth.¹⁷

The current study noted that older and more experienced dentists had significantly more knowledge than their younger and less experienced counterparts. In contrast, Gelsomina L. et al. (2012)²⁰ used a questionnaire to assess the knowledge of orofacial pain among 89 dentists and 57 fourth- and fifth-year dental students in Australia. The study discovered that the mean Pain Knowledge Questionnaire Dental (PKTD) score of dental students in their fourth year was comparable to that of licensed dentists, while. the students of fifth year performed better.

Limitations: The current study had limitations with respect to delayed response and lack of responsiveness towards the online survey on the part of those approached. In-person surveys were submitted and collected within 1 week.

Conclusion

Older and more experienced dentists had more knowledge than younger and less experienced dentists. TN education courses should be included in dental schools' curricula to improve the future dentists' understanding for a good treatment approach.

Table-2: Continued from previous page.

| | Specialty [n (%)] | | | χ^2 value | p-value |
|---|----------------------|----------------------------|---------------|----------------|---------|
| | General Practitioner | Oral Maxillofacial surgeon | Oral medicine | | |
| * Other - Orofacial pain specialist | 2 (1.00) | 0 (0) | 0 (0) | | |
| Paediatric dentistry | 1 (0.50) | 0 (0) | 0 (0) | | |
| <i>Do Electric shock like pain is a symptom felt in TN?</i> | | | | | |
| I don't know | 24 (12.40) | 0 (0) | 0 (0) | 1.86 | 0.76 |
| No | 13 (6.70) | 0 (0) | 0 (0) | | |
| Yes | 157 (80.90) | 6 (100) | 2 (100) | | |
| <i>Is the TN pain usually unilateral?</i> | | | | | |
| I don't know | 24 (12.40) | 0 (0) | 0 (0) | 1.99 | 0.737 |
| No | 15 (7.70) | 0 (0) | 0 (0) | | |
| Yes | 155 (79.90) | 6 (100) | 2 (100) | | |
| <i>TN can be related to pain caused by neck muscles disorder?</i> | | | | | |
| I don't know | 51 (26.30) | 0 (0) | 0 (0) | 10.62 | 0.031* |
| No | 63 (32.50) | 5 (83.30) | 2 (100) | | |
| Yes | 80 (41.20) | 1 (16.70) | 0 (0) | | |
| <i>Can you rely on the Aggravating factors (e.g. trigger factors or particular trigger zones) in diagnosis?</i> | | | | | |
| I don't know | 44 (22.70) | 0 (0) | 0 (0) | 2.8 | 0.587 |
| No | 25 (12.90) | 1 (16.70) | 0 (0) | | |
| Yes | 125 (64.40) | 5 (83.30) | 2 (100) | | |
| <i>Is TN pain sudden and unexpected and short lasting?</i> | | | | | |
| I don't know | 26 (13.40) | 0 (0) | 0 (0) | 2.17 | 0.704 |
| No | 41 (21.10) | 1 (16.70) | 0 (0) | | |
| Yes | 127 (65.50) | 5 (83.30) | 2 (100) | | |
| <i>Pain from TN often can be eliminated by LA (local anaesthesia)?</i> | | | | | |
| I don't know | 43 (22.20) | 0 (0) | 0 (0) | 2.27 | 0.686 |
| No | 79 (40.70) | 3 (50.00) | 1 (50.00) | | |
| Yes | 72 (37.10) | 3 (50.00) | 1 (50.00) | | |
| <i>What is the best imaging technique used to diagnose TN?</i> | | | | | |
| CT (computed Tomography) | 31 (16.00) | 1 (16.70) | 0 (0) | 17.75 | 0.023* |
| I don't know | 3 (1.50) | 0 (0) | 0 (0) | | |
| MRI (magnetic Resonance Imaging) | 160 (82.50) | 5 (83.30) | 2 (100) | | |
| <i>Is Carbamazepine the most common drug used to treat TN?</i> | | | | | |
| I don't know | 61 (31.40) | 1 (16.70) | 0 (0) | 1.97 | 0.74 |
| No | 7 (3.60) | 0 (0) | 0 (0) | | |
| Yes | 126 (64.90) | 5 (83.30) | 2 (100) | | |
| <i>Are non-steroidal anti-inflammatory drugs (NSAIDs) the first line for treatment of TN?</i> | | | | | |
| I don't know | 51 (26.30) | 0 (0) | 0 (0) | 6.4 | 0.17 |
| No | 70 (36.10) | 4 (66.70) | 2 (100) | | |
| Yes | 73 (37.60) | 2 (33.30) | 0 (0) | | |
| <i>Is the knowledge obtained during (undergraduate, postgraduate) enough for diagnosing TN?</i> | | | | | |
| I don't know | 23 (11.90) | 0 (0) | 0 (0) | 7.08 | 0.132 |
| No | 125 (64.40) | 4 (66.70) | 0 (0) | | |
| Yes | 46 (23.70) | 2 (33.30) | 2 (100) | | |
| <i>Does oral hygiene gets affected in TN patients?</i> | | | | | |
| I don't know | 36 (18.60) | 0 (0) | 0 (0) | 2.05 | 0.725 |
| No | 55 (28.40) | 2 (33.30) | 1 (50.00) | | |
| Yes | 103 (53.10) | 4 (66.70) | 1 (50.00) | | |
| <i>Duration of pain</i> | | | | | |
| I don't know | 1 (0.50) | 0 (0) | 0 (0) | 2.27 | 0.685 |
| Long lasting | 72 (37.10) | 1 (16.70) | 0 (0) | | |
| Short lasting | 121 (62.40) | 5 (83.30) | 2 (100) | | |
| <i>Does the pain radiates to other places?</i> | | | | | |
| I don't know | 38 (19.60) | 0 (0) | 0 (0) | 18.43 | 0.001* |
| No | 25 (12.90) | 3 (50.00) | 2 (100) | | |
| Yes | 131 (67.50) | 3 (50.00) | 0 (0) | | |
| <i>Variability of pain</i> | | | | | |
| Definite variation | 94 (48.50) | 2 (33.30) | 0 (0) | 16.51 | 0.011* |
| I don't know | 4 (2.10) | 0 (0) | 0 (0) | | |
| Stereotype (fixed pattern) | 96 (49.48) | 4 (66.66) | 2 (100) | | |

Continued on next page

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Table-2: Continued from previous page.

| | Specialty [n (%)] | | | χ^2 value | p-value |
|--|----------------------|----------------------------|---------------|----------------|---------|
| | General Practitioner | Oral Maxillofacial surgeon | Oral medicine | | |
| <i>Does sensation gets lost in TN patients?</i> | | | | | |
| I don't know | 70 (36.10) | 0 (0) | 1 (50.00) | 5.7 | 0.221 |
| No | 58 (29.90) | 4 (66.70) | 1 (50.00) | | |
| Yes | 66 (34.00) | 2 (33.30) | 0 (0) | | |
| <i>Course of pain</i> | | | | | |
| I don't know | 2 (1.00) | 0 (0) | 0 (0) | 10.71 | 0.218 |
| No remission | 17 (8.80) | 0 (0) | 0 (0) | | |
| Spontaneous remission | 82 (42.30) | 3 (50.00) | 0 (0) | | |
| Sudden pain | 93 (47.90) | 3 (50.00) | 2 (100) | | |
| <i>Duration of paroxysms (the recurrence of attacks)</i> | | | | | |
| Continues | 48 (24.70) | 1 (16.70) | 0 (0) | 0.854 | 0.653 |
| Seconds to 2 minutes | 146 (75.30) | 5 (83.30) | 2 (100) | | |

TN: Trigeminal neuralgia *Statistical significance set at 0.05; χ^2 value: Chi-Square.

Table-3: Distribution of overall knowledge related to trigeminal neuralgia (TN) among the dental practitioners.

| Question | Correct Answers | n (%) |
|--|----------------------------------|--------------|
| Do Electric shock like pain is a symptom felt in TN? | Yes | 165 (81.7) |
| Is the TN pain usually unilateral? | Yes | 163 (80.7) |
| TN can be related to pain caused by neck muscles disorder? | No | 70 (34.7) |
| Can you rely on the Aggravating factors(e.g. trigger factors or particular trigger zones) in diagnosis? | Yes | 132 (65.3) |
| Is TN pain sudden and unexpected and short lasting? | Yes | 134 (66.3) |
| Pain from TN often can be eliminated by LA (local anesthesia)? | Yes | 76 (37.6) |
| What is the best imaging technique used to diagnose TN? | MRI (magnetic Resonance imaging) | 167 (82.7) |
| Is Carbamazepine the most common drug used to treat TN? | Yes | 133 (65.8) |
| Are NSAID's the first line for treatment of TN? | No | 76 (37.6) |
| Does oral hygiene gets affected in TN patients? | Yes | 108 (53.5) |
| Duration of pain | Short lasting | 128 (63.4) |
| Does the pain radiates to other places? | No | 30 (14.9) |
| Variability of pain | Stereotype (fixed pattern) | 102 (50.5) |
| Does sensation gets lost in TN patients? | No | 63 (31.2) |
| Course of pain | Spontaneous remission | 85 (42.1) |
| Duration of paroxysms (the recurrence of attacks) | Seconds to 2 minutes | 153 (75.7) |
| Mean overall Percentage of Knowledge | | 55.23 |

NSAID: Non-steroidal anti-inflammatory drug.

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