

Knowledge and Awareness of Bell's Palsy Among Dentists and Dental Students in Riyadh City, Kingdom of Saudi Arabia

Asma Al Meslet¹, Shaima Aldhafeeri², Atheer Alzahrani², Ashwaq Alshehri², Kawther Al-gahtani², Marwa Abdul Majeed² and Monera Alanizi²

Background

Bell's palsy is an idiopathic, acute peripheral palsy of the facial nerve that results in muscle weakness on one side of the face, characterized by sudden onset, and unilateral facial paralysis, lower motor neurone weakness of the facial nerve with no other neurological abnormalities and no readily identifiable cause believed to be caused by inflammation of the facial nerve [5]. Recently, attention has focused on infection with herpes simplex virus type 1 (HSV-1) and/or herpes zoster virus from the geniculate ganglion is thought to be the mostly likely cause

Methods

Ethical Approval: Study proposal was submitted to the research center of Riyadh Elm University and ethical approval (Institutional Review Board IRB) was obtained. The study was registered under the registration number: FUGRP/2018/211.

Study Method: Quantitative. **Study Design:** A cross sectional paper-based questionnaire survey and an online survey was developed using surveymonkey.com

| Gender | n (%) |
|--------|----------|
| Male | 207 (32) |
| Female | 438 (68) |

| University | n (%) |
|--|----------|
| Riyadh Elm University (REU) | 223 (35) |
| King Saud University (KSU) | 111 (17) |
| King Abdullah bin Abdulaziz Hospital (KAAUH-FNU) | 103 (16) |
| DAU | 69 (11) |
| Furabi College | 62 (10) |
| Other | 77 (12) |

| Year | n (%) |
|----------------------|----------|
| Year 4 | 137 (21) |
| Year 5 | 141 (22) |
| Year 5 | 186 (29) |
| Intern | 79 (12) |
| General Practitioner | 102 (16) |

| Question | Yes | n (%) |
|---|---------------------------|----------|
| Have you ever faced patient with Bell's palsy in your clinic? | Yes | 149 (23) |
| | No | 492 (77) |
| Do you think that Bell's palsy can happen during Inferior Alveolar Nerve Block? | Yes | 459 (72) |
| | No | 95 (15) |
| | I don't know | 87 (14) |
| What is the appreciated treatment if Bell's palsy happened immediately after procedure? | No treatment required | 96 (15) |
| | Anti-inflammatory therapy | 259 (40) |
| | Steroid therapy | 169 (26) |
| | I don't know | 117 (18) |
| If Bell's palsy has a late onset after therapy (hours, days), the cause could be? | Needle injection injury | 245 (38) |
| | Viral infection | 174 (27) |
| | Wrong dental procedure | 132 (21) |
| | I don't know | 89 (14) |
| If you have patient with Bell's palsy, can you do dental procedure? | Yes | 188 (29) |
| | No | 451 (71) |
| Does Bell's palsy cause dry mouth? | Yes | 257 (40) |
| | No | 187 (29) |
| | I don't know | 197 (31) |
| Do you think Botox is recommended as an esthetic solution? | Yes | 356 (60) |
| | No | 158 (22) |
| | I don't know | 119 (19) |
| The area of injection for Botox will be? | Affected area | 348 (54) |
| | Unaffected area | 246 (38) |
| | Area away from the face | 49 (8) |

Knowledge regarding dental consideration of Bell's palsy.

| Question | n (%) | |
|--|--------------------|----------|
| Which of the following studies measures facial nerve degeneration in patients with Bell palsy? | I don't know | 147 (23) |
| | Electroneurography | 336 (52) |
| | PET | 76 (12) |
| | CT scan | 85 (13) |

| Question | Yes | n (%) |
|--|---------------------------------------|----------|
| Which of the following studies measures facial nerve degeneration in patients with Bell palsy? | I don't know | 147 (23) |
| | Corticosteroids | 248 (39) |
| If treatment is administered, which of the following is the most widely accepted? | Surgery | 131 (20) |
| | No need for treatment, Follow up only | 175 (27) |
| | I don't know | 89 (14) |
| | Yes | 109 (17) |
| Is Bell's palsy permanent damage? | No | 424 (66) |
| | I don't know | 110 (17) |

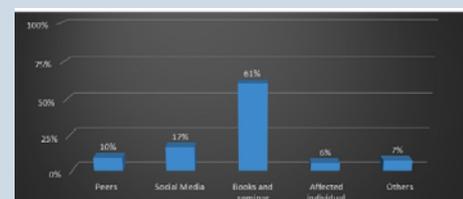
Knowledge regarding diagnosis and treatment of Bell's palsy

Objectives

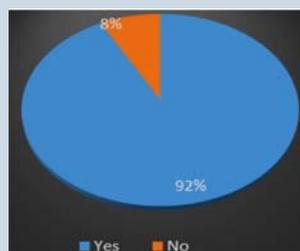
measure the knowledge and attitude among dental students and dental interns about Bell's palsy in Riyadh city, KSA.

Results

Of the total 645 participants, over two third were females (68), The majority of the participants reported that they have heard about Bell's palsy (92%). The majority reported appropriately that facial nerve is affected in a patient with Bell's palsy (87%). One third re-reported that diabetes is a risk factor for Bell's palsy (33%). Most of the participants reported that Bell's palsy last up to 6 months (59%). The majority reported that Bell's palsy can happen during inferior alveolar nerve block (72%).



Source of knowledge regarding Bell's palsy.



Participants response on if they have ever heard about Bell's palsy

| Question | Yes | n (%) |
|---|---|----------|
| Which Cranial nerve is affected in a patient with Bell's palsy? | Optic nerve (2nd cranial nerve) | 20 (3) |
| | Trochlear nerve (4th cranial nerve) | 32 (5) |
| | Facial nerve (7th cranial nerve) | 561 (87) |
| | Vagus nerve (10th cranial nerve) | 28 (4) |
| Do you think that Bell's palsy Central or Peripheral Facial palsy? | Peripheral FP | 584 (92) |
| | Edon's Exam | 313 (48) |
| Can Bell's palsy affect both side of face? | No | 87 (13) |
| | Edon's Exam | 343 (52) |
| Is Bell's palsy triggered by viral infection? | No | 265 (41) |
| | Edon's Exam | 144 (22) |
| Which of the following disease have risk factor for Bell's palsy? | Diabetes | 213 (33) |
| | Hypertension | 223 (35) |
| | Obesity | 52 (8) |
| | Severe procelantopia | 156 (24) |
| What is the early ocular complications? | Lagophthalmos (Inability to close the eye completely) | 342 (53) |
| | Synergia (Abnormal involuntary facial movement) | 87 (14) |
| | Contracture of the facial muscles | 136 (21) |
| | I don't know | 79 (12) |
| Incomplete eye closure happened in which of the following grade of Bell's palsy | Grade I | 148 (23) |
| | Grade II | 60 (9) |
| | Grade III | 111 (17) |
| | Grade IV | 191 (30) |
| | I don't know | 134 (21) |
| In which grade the patient face is totally paralysed? | Grade IV | 199 (30) |
| | Grade V | 57 (9) |
| | Grade VI | 204 (32) |
| | I don't know | 130 (20) |
| How long does Bell's palsy last? | Up to 6 months | 378 (59) |
| | More than a year | 145 (23) |
| | I don't know | 121 (19) |

Knowledge regarding anatomy and Bell's palsy.

How to improve ?

In a study on Bell's palsy and its clinical significance, it was concluded that knowledge of the anatomy and clinical significance of Bell's palsy may help to make accurate diagnosis and give proper treatment [14].

We found it should increase the educational and clinical curriculum on Bell's palsy for dentists.

Conclusions

We found that result regarding knowledge of anatomy, diagnosis and treatment of Bell's palsy was satisfactory and suggest that they have sufficient awareness. Unfortunately, regarding dental consideration of Bell's palsy, the participant lack how to manage patients with Bell's palsy if it is happened immediately after dental procedure. Knowledge of the anatomy and clinical significance of Bell's palsy may help to make accurate diagnosis and provide appropriate treatment. We recommend that dental students and dentists should expose to any medical condition that could be happen because of iatrogenic reason.

Discussion

According to this study the dental students and dentist awareness of bell's palsy was satisfactory. This present study examines the knowledge and attitude among the dentists on Bell's palsy, to our knowledge there have almost no reported studies on knowledge and attitude of Bell's palsy among dental students. According to a study done by [13] Electroneurography is an valuable diagnostic test and should be done several time in different point of Bell's palsy since in most cases nerve degeneration last for first two weeks. In this study 52% of the participants answered that Electroneurography useful in measures facial nerve degeneration in patients with Bell's Palsy which is a satisfactory proportion . As for treatment, 39% of participant choose corticosteroid as most widely accepted. Previous studies reported that initial treatment of Bell's palsy is corticosteroid to improve facial function recovery and reduce inflammation, antiviral medication which may be prescribed if a virus caused Bell's palsy. In this Study 60% of target group were agreed botox as esthetic solution for Bell's palsy. However, Facial asymmetry and muscular contractures may require cosmetic surgical procedures or botulinum toxin (Botox) injections. In these cases, consultation with an ophthalmologist or cosmetic surgeon is needed [17,18]. A complete recovery of the signs and symptoms of Bell's palsy is seen in a period of two months among 70-80% patients. A varying degree of residual dysfunction among the other 20-30% patients [19].

References

