

Awareness Of Idiopathic Harlequin Syndrome Among Dental Students

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Abstract

Introduction: Harlequin syndrome is considered to be a rare autonomic disorder characterised by unilateral facial flushing of the face and sweating with contralateral anhidrosis induced by emotion, heat, and exercise. It is usually idiopathic. Medical or surgical treatments are not required for idiopathic Harlequin syndrome, but social and psychological factors may indicate sympathectomy or botulinum toxin injection.

Aim: The aim of the study is to find the awareness about Idiopathic Harlequin syndrome among the dental students.

Materials and Methods: A survey questionnaire was prepared with 10 questions and was circulated among the general population through an online portal. Responses obtained were tabulated in an excel sheet and analysed using SPSS software and the statistical values were analysed for plotting the graphs. Graphs were plotted and the results were compared with responses obtained from the participated general population.

Results and Discussion: Majority of the responders 83% responded no for the diagnosis and identification of the syndrome. The results after the analysis of the survey showed that the awareness of the dental students on the Idiopathic Harlequin syndrome was very less as it is a rare disorder.

Conclusion: The study concluded that the dental students are comparatively less aware of the Idiopathic Harlequin syndrome and require more knowledge to diagnose a patient with the syndrome.

KEYWORDS: Harlequin syndrome, Facial flushing, Innovative technology

INTRODUCTION:

Harlequin syndrome is a rare autonomic disorder that is specifically characterised by unilateral facial flushing and sweating with contralateral anhidrosis in which the condition of swelling of one side of the face which is seen with asymmetry induced by external effects like environmental heat, exercise, emotion (1) and involves autonomic neuropathy. It is usually idiopathic which shows that the syndrome does not have any proper etiology or any origin by nature or any induced effects. Harlequin syndrome from the previous studies shows based on gender females are the commonly affected individuals (2). Proper diagnosis methods and treatment for the idiopathic harlequin syndrome is not yet identified. Proper diagnosis along with clinical examination has to be performed in order to find out the underlying cause for the syndrome and changes under dental setup, neurological signs and symptoms helps in proper diagnosis of idiopathic harlequin syndrome (3). Medical or surgical treatments are not required for idiopathic Harlequin syndrome, but social and psychological factors may indicate the treatment of the syndrome by sympathectomy or botulinum

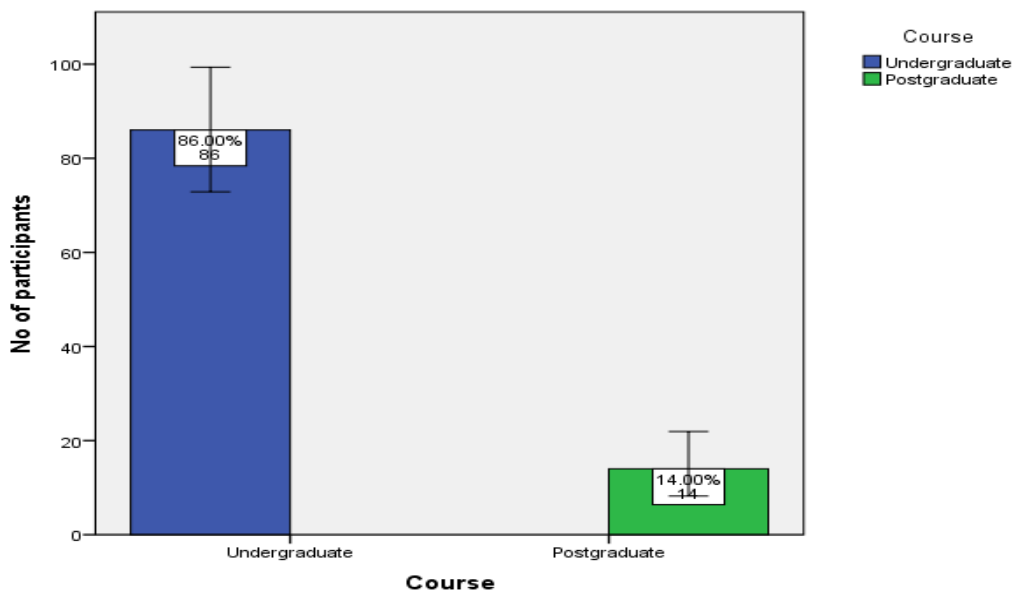
toxin injection (4)(5). Changes in the neurological signs help in the easy clinical diagnoses of the syndrome in major cases (6).

. Aim of the study is to find the awareness about Idiopathic Harlequin syndrome among the dental students.

MATERIALS AND METHODS:

A survey questionnaire was prepared with 10 questions and was circulated among the dental students to analyze and evaluate the knowledge on the idiopathic harlequin syndrome. This survey was conducted through an online portal, questionnaires were prepared using google forms and circulated among 100 participants comprising the undergraduate and postgraduate randomly using social media; it took about 5-10 minutes to complete the survey. Responses obtained from the survey were tabulated in an excel sheet and analysed using SPSS software and the statistical values were analysed for plotting the graphs. The charts were plotted and the results were compared with responses obtained from the dental students to know about their awareness.

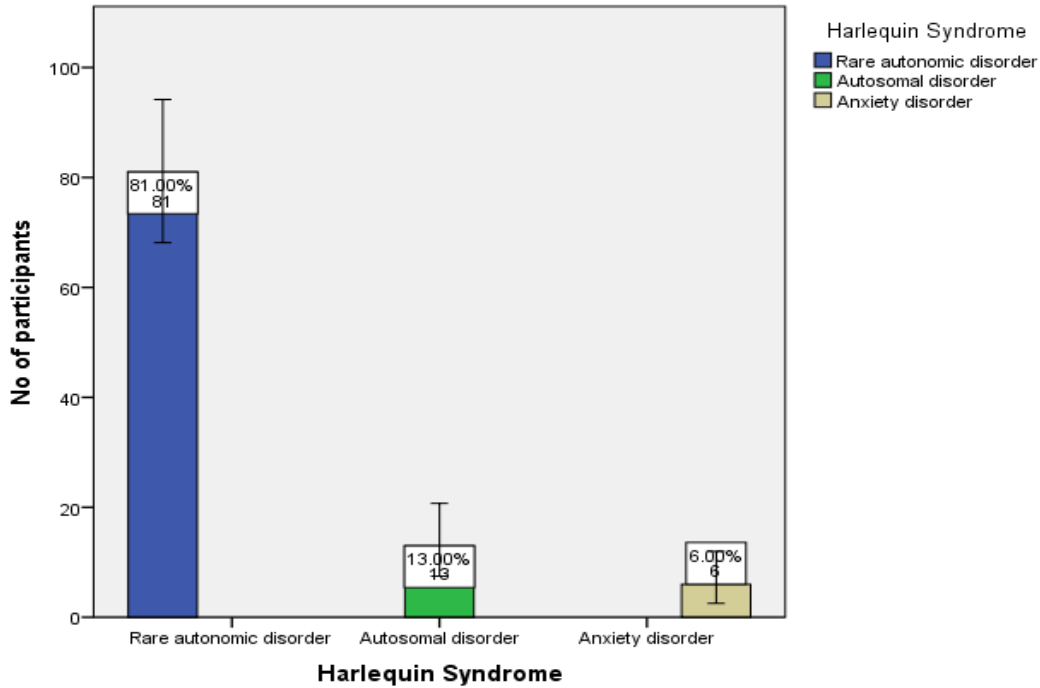
RESULTS:



Graph 1, represents the course of the dental students; The number of participants is represented in Y axis and the course is represented in X axis. Majority of responders

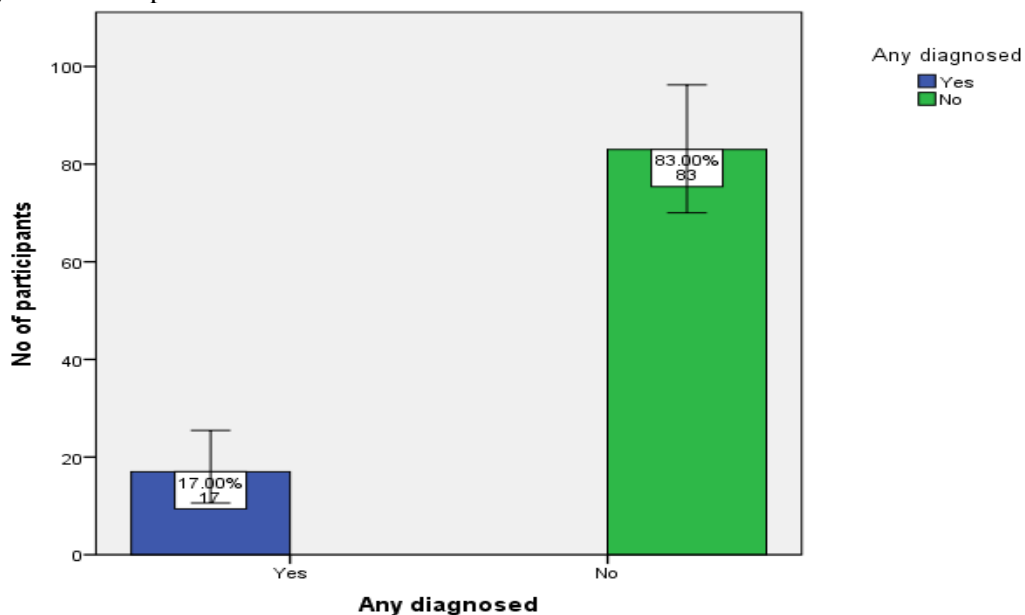
were undergraduate students which is 86% which is represented in blue compared to the postgraduates which is 14% were the majority

responding dental students compared to postgraduate students 14%.



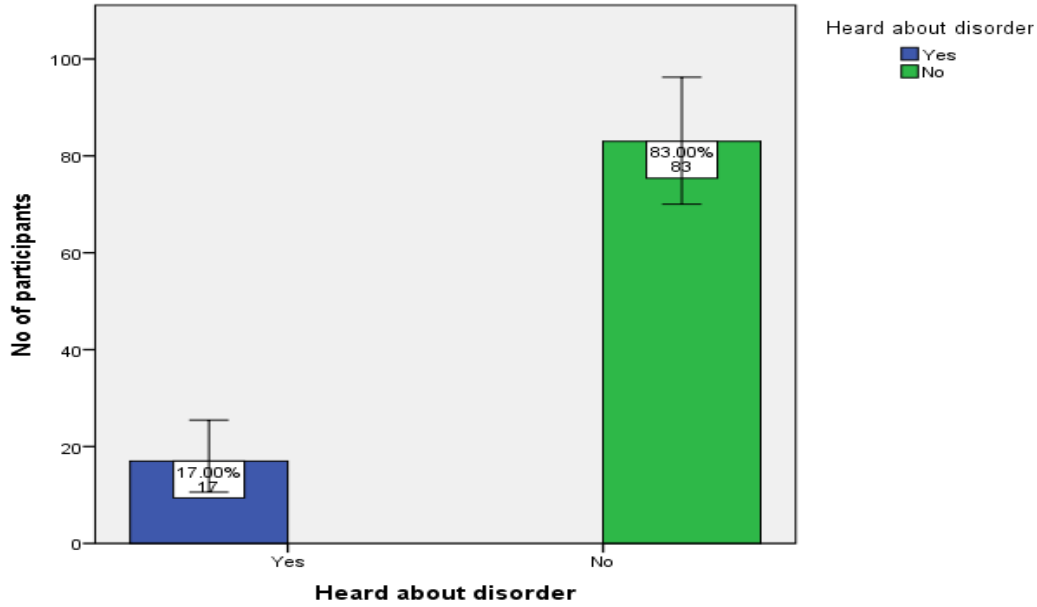
Graph 2, represents the knowledge about the type of disorder it comes under; The number of participants is represented in Y axis and what is harlequin syndrome is represented in X axis. Majority of 81% responded as a rare autonomic

disorder which is represented in blue compared to autosomal disorder 13% which is represented in green and anxiety disorder 6% which is represented in peach.



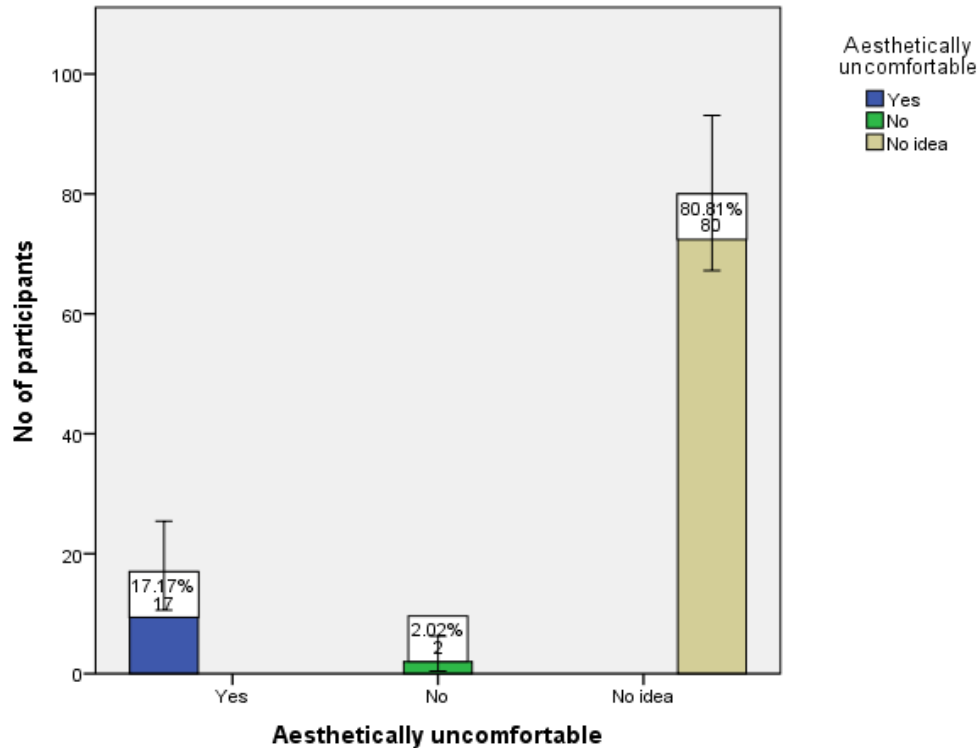
Graph 3, represents the diagnosis of the individual in cases of idiopathic harlequin disorder; The number of participants is represented in Y axis and responders who have

diagnosed harlequin syndrome is represented in X axis. Majority of 83% responded as no which is represented in green compared to yes 17% which is represented in blue.



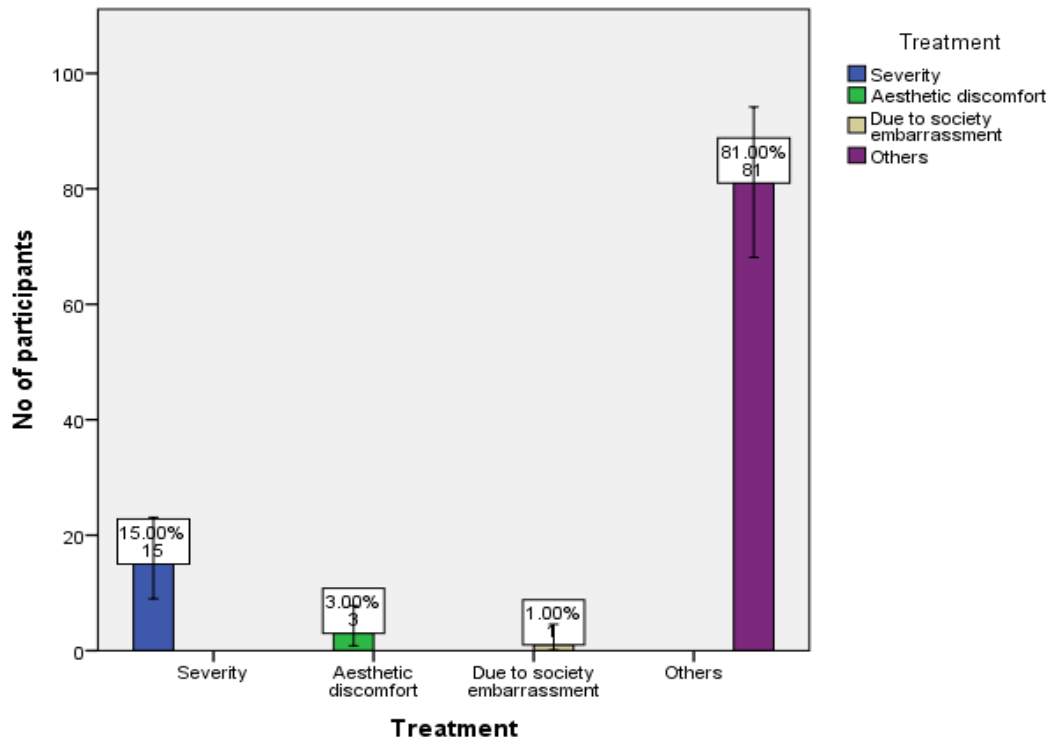
Graph 4, represents the known features and heard about the disorder; The number of participants is represented in Y axis and responders heard about harlequin syndrome is represented in X axis.

Majority of 83% responded no which is represented in green compared to yes 17% which is represented in blue.



Graph 5, represents the discomfort of the patient regarding the aesthetics; The number of participants is represented in Y axis and the patient feels aesthetically uncomfortable is

represented in X axis. Majority of 80% responded with no ideas which are represented in peach compared to yes 17% which are represented in blue and no 2% which are represented in green.



Graph 6, represents the type of treatment given to the patients with the syndrome; The number of participants is represented in Y axis and type of treatment is represented in X axis. Majority of 81% responded as others which is represented in purple compared to severity 15% which is represented in blue, aesthetic discomfort 3% which is represented in green and due to society embarrassment 1% which is represented in peach.

DISCUSSION:

Harlequin syndrome is also associated with Horner syndrome which is another autonomic disorder with signs (7)(2). This syndrome on the secondary occurrence occurs due to structural lesions like tumour, lymphatic malformation and vascular compression (8). The underlying mechanism includes pathophysiological vasodilation involving thermoregulatory flushing of the contralateral side of face, uninjured side (9).

The radiological findings in the harlequin syndrome were seen to be normal with no abnormalities. On the main examination for the brain CT and MRI has to be taken to identify the abnormalities in the brain. Other examinations needed for the harlequin syndrome include

sweating test to assess the amount of sweat, cardiovascular reflex test to know about the autonomic nervous system (7). Secondary harlequin syndrome is the structural lesion of harlequin syndrome (10). Our team has extensive knowledge and research experience that has translated into high quality publications(11–19),(20–25),(26–32)

The results after the analysis of the survey showed that the awareness of the dental students on the Idiopathic Harlequin syndrome was very less as it was a rare disorder. Most of the participants 81% responded that the syndrome was a rare autonomic disorder. Majority of the responders 83% responded no for the diagnosis and identification of the syndrome. These results of the study clearly showed that the dental students were not aware about the idiopathic harlequin syndrome.

CONCLUSION:

The study concluded that the dental students are comparatively less aware of the Idiopathic Harlequin syndrome and require more knowledge to diagnose a person with the syndrome during a visit to the dental office.

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CONFLICTS OF INTEREST:

No conflicts of interest

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