ORIGINAL ARTICLE

KNOWLEDGE OF DENTISTS ABOUT EPILEPSY AND THEIR ATTITUDE TOWARD THE DENTAL TREATMENT OF EPILEPTIC PATIENTS: A SURVEY OF DENTISTS IN PESHAWAR — PAKISTAN

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ABSTRACT

The relationship of epilepsy with society, knowledge of people, attitude, and how may it affect the access of people with epilepsy to dental care. A questionnaire that explored facts about the knowledge, attitude and willingness to provide dental care to people with epilepsy was delivered to 129 dentists personally in the city of Peshawar (KPK), Pakistan. Of the 129 respondents, 10.9% were general dentists. Knowledge was patchy about the epidemiology, causes, treatment and recognition of epilepsy. 44% of dentists did not think that they could safely treat patient of epilepsy in their offices. Lack of knowledge and negative attitude towards epilepsy may affect the access to dental care for people with epilepsy.

Key Words: *Epilepsy, Knowledge, Attitude, Dentist.*

INTRODUCTION

Epilepsy is group of neurological disorder characterized by epileptic seizures.[2,3] Epileptic seizures are episodes that can vary from brief and nearly undetectable to long periods of vigorous shaking.[4] In epilepsy, seizures tend to recur, and have no immediate underlying cause[2] while seizures that occur due to a specific cause are not deemed to represent epilepsy.[5] About 1% of people worldwide (65 million) have epilepsy[6] and nearly 80% of cases occur in developing countries.[4] Epilepsy becomes more common as people age.[7,8] In the developed world, onset of new cases occurs most frequently in infants and the elderly in the developing world it is in older children and young adults[10] due to differences in the frequency of the underlying causes. About 5-10% of all people will have an unprovoked seizure by the age of 80[11] and the chance of experiencing a second seizure is between 40 and 50%.[12]

Stigma is commonly experienced, around the world, by those with epilepsy.[22] It can affect people economically, socially and culturally.[22] In India and China epilepsy may be used as justification to deny marriage.[4] People in some areas still believe those with epilepsy to be cursed[10] In Tanzania, as in other parts of Africa, epilepsy is associated with possession by evil spirits, witchcraft, or poisoning and is believed by many to be contagious[21] for which there is no evidence.[10] Before 1970 the United Kingdom had laws which prevented people with epilepsy from marrying.[4] The stigma may result in some people with epilepsy denying that they have ever had seizures.[16]

Different surveys have been done testing knowledge, attitude and beliefs of the general public, teachers and students about epileptic patients. Dentists and other healthcare professionals, representing the highly educated class of the society are not surveyed yet.[23-30] The perspective of dentists about people with epilepsy might affect their professional interaction with epileptic patients.

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There is some evidence in literature about disparities in care of epileptic patients, compared to that of the general population. We surveyed dentists in Peshawar to determine their knowledge, attitude to epilepsy, and their willingness to provide care to epileptic patients.

TABLE 1: AGE DISTRIBUTION OF PARTICIPANTS

Age	N	%
21-30	96	74.41
31-40	22	17.04
41-50	5	3.87
51-60	5	3.87
61-70	1	0.8
Total	129	100

TABLE 2: RESPONDENTS PERCENTAGES ACCORDING TO THEIR DEPARTMENTS/ SPECIALITIES

Department/Speciality	N	%
Orthodontics	28	21.7%%
Prosthodontics	25	19.3%
Paedodontics	2	1.5%
Endodontics	12	9.3%
Maxillofacial surgery	15	11.6%
Periodontology	19	14.7%
General dentistry	28	21.7%
Total	129	100%

TABLE3: RESPONSES TO KNOWING/ WITNESSING EPILEPSY

Know someone with epilepsy	97 (75%)
Witnessed an epileptic seizure	79 (61%)

TABLE 4: RESPONDENT'S RESPONSES TO QUESTIONS ABOUT THEIR KNOWLEDGE ABOUT EPILEPSY

Responses (total no. of responses	No. of responses (%)
Causes of epilepsy	
Accidents/head trauma (n=129)	23(1.8)
Inherited disease (n=129)	36(29.8)
Mental illness (n=129)	16(12.4)
Tumars (n=129)	22(17.1)
Birth defects (n=129)	16(12.4)
Strokes (n=129)	10(7.8)
Do not know (n=129)	4(3.1)

TABLE 5: RESPONDENT'S RESPONSES TO QUESTIONS ABOUT WHAT IS AN EPILEPTIC ATTACK

Responses (total no. of responses	No. of responses (%)
An epileptic attack is (n =129)	
Convulsion/shaking	67 (51.9)
Episode of loss of consciousness	19 (14.7)
Episode of behavioral change	11 (8.5)
Period of memory disturbance	6 (4.7)

TABLE 6: RESPONSES RELATED TO TREATMENT OF EPILEPSY WITH MEDICATIONS

Responses (total no. of responses	No. of responses (%)
Treatment of epilepsy with medications (n =129)	
Is seldom effective	19 (14.7)
Is better if 2 or more drugs are used	58 (45.0)
Has advanced in the last 10 years	26 (20.2)
Occasionally causes birth defects	22 (17.1)
Can be stopped after 1 year of control	6 (4.7)
Do not know	17 (13.2)

TABLE 7: RESPONSES RELATED TO PRACTICE DURING AN EPILEPTIC SEIZURE

Responses (total no. of responses	No. of responses (%)
If a patient has a seizure in the dental chair (n =129)	
Put something in patient's 66 mouth	66(51.2)
Hold patient tight	25(19.4)
Put patient in Trendelenburg position	20(15.5)
Administer oxygen	18(14.0)
Call Rescue 1122 immediately	24(18.6)
Time it, and call rescue 1122 after 3 minutes	42(32.6)
Move patient to a safe area	73(56.6)

TABLE 8: RESPONDENTS' RESPONSES TO QUESTIONS ABOUT SOCIAL TOLERANCE

Responses related to social tolerances (total no. of responses)	No. of responses (%)
I would object to my children associating with somebody with epilepsy (n =129)	30 (23.3%)
I would object to a marriage between a close relative and a person with epilepsy (n =129)	55 (42.6%)
People with epilepsy should not have children (n =129)	116 (89.9%)
People with epilepsy can be employed anywhere (n =129)	92 (71.3%)

TABLE 9: RESPONSES RELATED TO OFFICE PRACTICES FOR TREATMENT OF PATIENTS WITH EPILEPSY (N = 129)

Responses related to office practices for treatment of patients with epilepsy (n =129)				
Responses	**No. of responses (%)**			
	Strongly agree	**Agree**	**Disagree**	**Strongly disagree**
Medical history and physical examinations cannot identify all patients with epilepsy	10(7.8)	44(34.1)	50(38.8)	23(17.8)
Office policy is to refuse treatment to people with epilepsy	1(0.8)	9(7.0)	38(29.5)	78(60.5)
My family would be concerned if I treated patients with epilepsy	3(2.3)	19(14.7)	38(29.5)	68(52.7)
I can safely treat a person with epilepsy in the office	18(14.0)	73(56.6)	28(21.7)	10(7.8)
If I treat patients with epilepsy, other patients may be reluctant to continue in my care	5(3.9)	9(7.0)	62(48.1)	52(40.3)
As a dentist I have an ethical responsibility to treat patients with epilepsy	79(61.2)	44(34.1)	1(0.8)	5(3.9)

METHODOLOGY

After getting informed consent, we surveyed 129 dentists in Peshawar, Pakistan. Dentists from Sardar Begum Dental College, Peshawar Dental College and Khyber College of Dentistry participated in this cross sectional survey. A self administered, pretested, structured, 22-item questionnaire was used as a data collection tool . This questionnaire elicited information about demographics (3 items), personal experience with epilepsy (2 items), knowledge of epilepsy (5 items), social tolerance (4 items), current practices (2 items) and willingness to care for patients with epilepsy (6 items).We entered the data into SPSS version 20. The data was reviewed and analyzed numerous times by all the members of the study to ensure accuracy.

RESULTS

Out of the total 140 questionnaires, 129 were accepted and 11 discarded due to incomplete and missing values. Table 1 and Table 3 summarizes the age distribution of the and personal experience with epilepsy. 28(21.7%) out of 129 were general dentist, 97/129 (75.2%) knew someone with epilepsy and 79/129 (61.2%) had witnessed an epileptic seizure (Table 2).

Tables 4 summarize respondents' answers to the questions about their knowledge of epilepsy and social tolerance (Table 8). Because not all respondents answered all the questions in the survey, we calculated percentages based on the number of responses for each question. Although most dentists did not know the prevalence of epilepsy, most knew that head trauma, tumors, brain malformations and strokes can cause epilepsy and that it may have a genetic cause.

About (16/129, 12.4%) attributed epilepsy to a mental illness. (67/129, 51.9%) knew that an epileptic seizure can be a convulsion or shaking (Table 4); Almost all (123/129, 95.3%) except few were unaware that non convulsive epileptic seizures occur. If a patient had a seizure in the dental chair, 51.2% (66/129) of respondents would put something in the patient's mouth, and 19.4% (25/129) would hold the patient tight (Table 7).

In answer to questions about their social tolerance for people with epilepsy, 23.3% (30/129) of respondents would not allow their children to associate with people with epilepsy, 42.6% (55/129) would object to a person with epilepsy marrying a close relative, however 89.9% (116/129) agreed that people with epilepsy should have children, and 71.3% (92/129) believed that people with epilepsy can be employed anywhere (Table 8).

Table 9: summarizes respondents' answers to questions about their practices. Some (54/129, 41.9%) of the respondents agreed that they could not identify all patients with epilepsy from their medical history. Ten out of 129 respondents (7.8%) indicated that the office policy where they worked did not allow them to treat patients with epilepsy; 10.9% (14/129) believed that knowing that patients with epilepsy were treated in the same office might make other patients reluctant to continue their care there. 93 percent of respondents (106/129) indicated that their families would not be concerned about their treating patients with epilepsy. 28.5% of the respondents (38/129) did not think they could safely treat patients with epilepsy in their offices; 95.3% of respondents (123/129) believed that they had an ethical responsibility to treat this population.

DISCUSSION

Our survey indicates that in our dental respondents' knowledge of epilepsy care was more limited than we expected from health professionals. Our respondents had limited knowledge about the prevalence of the disease and the teratogenicity of antiepileptic drugs, although most had appropriate knowledge about the cause of seizures and their ictal manifestations. One explanation may be that dentists in private practices are less exposed to patients with epilepsy because they are often treated in hospitals or they may consider their dental health the least of their problems. Of concern is the finding that almost half of respondents would place something in the patient's mouth (51.2%) or would put the patient in the Trendelenburg position (15.5%) during a seizure, actions that are not recommended for patients having a seizure.[31] Most (73%) of the surveyed dentists knew that they must move a patient having a seizure to a safe area to avoid injuries; almost half (42.70%) knew that they must time the seizure and that if it lasted more than 3 minutes they must call Rescue 1122.[31]

In general, attitudes toward people with epilepsy were positive, although one third of respondents would not allow their children to socialize with people with epilepsy and half of them did not want their relatives to marry someone with epilepsy. A study 33 from Kentucky found that the most educated urban population had the greatest bias against people with epilepsy on the Relative Quality of Life measure, compared with rural and Appalachian residents. Only a few (4%) dental respondents had negative attitudes about the employment of people with epilepsy, a finding potentially influenced by concerns about their safety or abilities rather than by workplace discrimination.[34,35]

(28.7%) dental respondents had negative attitudes about the employment of people with epilepsy, a finding potentially influenced by concerns about their safety or abilities rather than by workplace discrimination. The answer to this question is important because the burden of unemployment that people with epilepsy face often negatively affects their self-image. Dentists' attitudes toward people living with epilepsy and their impact on these people's access to dental care needs further study. Health care providers' negative attitudes toward certain groups of people negatively influences their access to care. For almost all aspects of the oral health and dental status of patients with epilepsy, their condition is significantly worse than that of age-matched groups without epilepsy in the general population.

Only a few (7.8%) of our respondents indicated that the policy of their office was to refuse treatment of patients with epilepsy. Although we did not ask about the reason for this refusal in our survey, one explanation could be related to financial access to dental care. Because patients with epilepsy may have special needs during dental treatment, the treating dentist should be knowledgeable about the disease and about the appropriate actions to take when a patient has a seizure in the office.

Understanding epilepsy and seizures raises awareness about the disorder's impact on these patients' general medical and psychological health, and meets an important goal of the "Out of the Shadows" campaign of the International League against Epilepsy, namely, "to reduce the limitations encountered by persons with epilepsy and their families.[32]"

CONCLUSION

Epileptic patient's may be at a disadvantage, due to dental care provider's lack of knowledge and negative attitude of some dental providers towards them.

Recommendations

Educating dental students about how to handle patients with special needs should be made mandatory. Moreover dentists should be trained how to handle epileptic patients in their dental practices. Continuing professional development can play a big role in achieving this goal.

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