

Dental Health and Epilepsy: Important but Too Often Ignored

Dear Editor,

We read the article entitled “neurodevelopmental disorder with microcephaly, epilepsy, and brain atrophy” with a novel mutation in the recent issue of the journal with great interest. Fathalla and Salman reported homozygous mutations in the TRAPPC6B gene that presented with anatomical malformation of the skull and brain associated with epilepsy. One interesting fact was that there are only eight similar cases already published in the literature.^[1]

Oral health in individuals with epilepsy is an important topic but it is often forgotten or less highlighted among other features that the patients have and particularly when there is neurodevelopment impairment such as in the case reported by Fathalla and Salman.

A recent study done in Poland found that the majority of the epileptic patients did not have regular dental checkups. When the group was divided into rural and urban individuals, the authors found that rural patients had worse oral health. In this context, this recent study underscores the importance of increasing the regular dental care availability even to small towns of developed countries.^[2] We believe that this has probably occurred due to both financial reasons and the low number of clinics available in the studied region.

Also, Morgan *et al.* investigated 100 epileptic individuals over a year in Egypt. They found similar to other studies increased number of gingival problems and liability to develop caries in individuals with epilepsy. Furthermore, their study showed that oral traumatic injuries were not commonly found if the patient is well-controlled of seizure attacks.^[3] In this way, the oral health of epileptic patients is possibly related to the onset of the seizure, and the generalized onset would be worse than the focal one when motor characteristics are present.

Furthermore, another recent study evaluated parental opinions about the health status in their children with epilepsy. Some of the results were revealed that patients with associated cerebral palsy or intellectual impairment had almost double the odds of having more bad teeth than individuals with epilepsy only. This could be associated with increased drug resistance and worst control of the seizures. They also found that the severity of mental impairment is directly related to the risk of having dental caries. Therefore, these results highlight the need for special management of their disabilities with the dependence of caregivers.^[4,5]

Interestingly, Natarajan and Prabu studied the knowledge about epilepsy among dental students. Their results showed that the academic knowledge is low. When attacks occur, some of the participants demonstrated a negative attitude. Furthermore, the results revealed that 20% considered contagiousness as relevant and 40% marked epilepsy as not being a neurological condition. Therefore, this study was an important to confirm the necessity for increased awareness about epilepsy as with conferences and additional educational classes about this condition which affects about 1% of the population.^[6]

We would like to provide the mnemonic “DEpvceNTAL” [Table 1] to help relevant health-care providers remember the main facts about oral health in patients with epilepsy.^[1-4,6]

Author contribution

JPR and ALFC contributed equally.

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There are no conflicts of interest.

Compliance with ethical principles

There are no conflicts of interest.

Table 1: The mnemonic “DEpvceNTAL” may help health-care providers remember the main facts about oral health in patients with epilepsy^[1-4,6]

Acronym	Detail
D	Disheveled and poor careless due to socioeconomic status and access to dental care
Epvce	Enlargement of gingiva due to poor dental hygiene or induction of growth factors by medications Phenytoin and mephenytoin, phenobarbital, primidone Vigabatrin, valproic acid Carbamazepine Ethosuximide and methosuximide, ethosoin
N	Nonwanted indirect reaction of medications such as gingival hypertrophy and increased fragility of teeth
T	Traumatic injury from falls during convulsions, mainly associated with generalized tonic-clonic type
A	Adenoid hypertrophy leading to proclined teeth or even facial abnormalities in some genetic types
L	Low bone mineral density of the teeth associated with phenytoin, phenobarbital, and carbamazepine can increase the risk of fracture

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REFERENCES

- Fathalla WM, Salman FH. “Neurodevelopmental disorder with microcephaly, epilepsy, and brain atrophy” with a novel mutation. *Ibnosina J Med Biomed Sci* 2019;11:192.
- Mielnik-Błaszczak M, Skawińska-Bednarczyk A, Michałowski A, Błaszczak J. Problems with access to dental treatment for children with epilepsy. *Epilepsy Behav* 2018;81:107-10.
- Morgan HI, Abou El Fadl RK, Kabil NS, Elagouza I. Assessment of oral health status of children with epilepsy: A retrospective cohort study. *Int J Paediatr Dent* 2019;29:79-85.
- Subki AH, Mukhtar AM, Saggaf OM, Ali RA, Khalifa KA, Al-Lulu DM,

et al. Parental perceptions of dental health and need for treatment in children with epilepsy: A multicenter cross-sectional study. *Pediatric Health Med Ther* 2018;9:165-72.

- Caprara AL, Rissardo JP, Leite MT, Silveira JO, Jauris PG, Arend J, *et al.* Course and prognosis of adult-onset epilepsy in Brazil: A cohort study. *Epilepsy Behav* 2020;105:106969.
- Natarajan K, Prabu D. Knowledge, attitude, and awareness about epilepsy among dental students. *Drug Invention Today* 2019;12:303-8.

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