Dravet Syndrome: Addressing the Needs of Patients and Families: Conclusion

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At the conclusion of this symposium, I wish to thank our speakers, whose presentations examined the most important aspects of Dravet syndrome, all essential to understanding the needs of patients and families.

Dr. Connolly drew a complete picture of the syndrome, underlining the complexity of its genetics and the discovery of new genes in patients who are negative for *SCN1A* mutations. Actually, a careful analysis of the clinical features of patients with *Protocadherin* or *CHD2* mutations show that they present characteristics different from those described in Dravet syndrome and cannot be deemed to have the syndrome, not even an atypical form. *PCDH19* syndrome may be discussed as a differential diagnosis in girls as early as possible when the first seizures are focal and occur in clusters. This is important for the treatment, since it seems it is not the same as in Dravet syndrome. For example, phenytoin and corticosteroids can be useful at the onset, which has not been reported in Dravet syndrome.[1] The immediate effect of corticosteroids has given rise to the hypothesis of an inflammatory process in this syndrome.[2] The seizure outcomes appear less severe than in Dravet syndrome, and a substantial number of patients become free of seizures at adolescence.[3,4] Conversely, the behavioural disturbances are more often in the autistic spectrum.[3-5] *CHD2* syndrome is also different, mainly because the age of onset is older—beyond the first and up to the fifth year. Development can be delayed before seizure onset, fever sensitivity is inconstant, myoclonic seizures are prominent, and patients can present with dysmorphia and microcephaly.[6] The majority of patients with Dravet syndrome who do not carry an *SCN1A* mutation remain without known aetiology, and we hope that the new genomic technologies will at least partially answer this question. Seizure semiology has been well studied in the first descriptions, but parents sometimes report seizures that are not easy to classify. "Atonic" seizures are usually mentioned as a seizure type in children with Dravet syndrome, but they are not documented by video-polygraphic recordings. What are these "atonic" seizures? I do not believe that they are the same as the drop attacks present in Lennox–Gastaut and Doose syndromes. Some patients present a loss of tone associated with loss of contact and such autonomic symptoms as pallor and lip cyanosis, and they could correspond to focal seizures. Others fall down abruptly, but it is difficult to demonstrate the mechanism of how this collapse could be due to myoclonus.

Dr. Wirrel exposed the different therapeutic options very clearly. Unfortunately, most patients still have frequent seizures. However, the seizures are probably not the most important factor in explaining the cognitive impairment. Several clinical and experimental studies address this question and tend to show that the cognitive outcome does not only depend on seizure frequency but also on the genetic background.[7-9] Further research should focus on the effects of the mutation in order to find a gene therapy (the only way to cure the disease) and to not only control the epilepsy. Caring related to the other components of the disease is thus mandatory and requires a multidisciplinary approach. Offering patients appropriate rehabilitation according to their deficits and adapted schooling should also be part of the treatment. And last, but certainly not least, a crucial role is played by parents and family members.

Dr. Camfield has shown how important helping is and how this can improve the quality of life of all family members.

Finally, I would like to highlight the place of family associations. They constitute a valuable source of support for family members through the meetings, the internet forums and the documentation they provide. They also serve as a link among family members, doctors, and the scientists working to further our knowledge about this disease and its treatment.

Disclosures

Charlotte Dravet has the following disclosure: Biocodex, consultant, honoraria.

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