**The ketogenic diet for Dravet syndrome: a multi-center retrospective study**

**Abstract**

**Background:** Ketogenic diet (KD) is one of the main treatments for drug-resistant epilepsy. However, there have been few multi-center reports of KD in the treatment of Dravet syndrome (DS) in the past. This paper analyzed the multidimensional data of large multi-center cases of KD in DS.

**Methods:** This was a retrospective, multiple centers’ cohort study.

**Results:** From March 2014 to March 2020, 114 patients of DS were treated with KD. The ratio of male to female was 67/47. The KD median initiation age was 3 year and 4 months and the median number of anti-seizure medications (ASMs) at KD initiation was 2.4. KD treatment was the first choice in 3 patients (2.6%), 10.5% patients started KD after the failure of the first ASM, 35.1% patients started KD after the failure of the second ASM, 44.7% after the third ASM, and 7.0% after the fourth and more ASMs. At KD 1, 3, 6 and 12 month, the seizure free rates were 14.0%, 32.5%, 30.7% and 19.3%, respectively; the rates of effectiveness were 57.9%, 76.3%, 59.6% and 43.0%, respectively; and the retention rates were 97.4%, 93.0%, 71.9% and 46.5%, accordingly; the rate of adverse events were 25.2%, 19.9%, 11.0% and 5.7%, respectively. They mainly occurred in the first 3 months of KD, and the main adverse events were gastrointestinal disturbance, constipation and fever.

**Conclusion:** The real world multi-center data analysis showed that KD was effective in patients with DS and had low incidence of side effects.

**Keywords**: epilepsy, Dravet syndrome, ketogenic diet, effective rate, adverse events