Ketogenic diet therapy provision in the COVID-19 pandemic: an Italian experience

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Ketogenic diet therapies (KDTs) require constant nutritional monitoring over time both to ensure their effectiveness and to reduce the likelihood of short- and long-term adverse effects. A careful monitoring appeared necessary even during the COVID-19 lockdown, despite the impossibility of providing routine outpatient visits and hospitalization as a strategy of virus spread containment adopted by the Italian Government. Our hospitalization and care center is located in Lombardy, the Italian region most affected by the COVID-19 pandemic, and our center is one of the national reference centers for the treatment of epilepsy with KDTs. Parents and patients thus have showed major concerns both regarding the potential risks of COVID-19 exposure in a hospital setting and related to the altered contact with referring epileptologist and nutritionist. Therefore, it has been necessary to adjust our usual healthcare assistance introducing tele-assistance and visits in video call.

In April, we contacted all our patients undergoing classic ketogenic diet (cKD) or modified Atkins diet (MAD), and we set up a follow-up video visit with our keto-team (child neurologist, nutritionist, and dietitians). We asked to provide in advance:

- actual height and weight
- updated list of medications and supplements
- blood chemistry
- ketonemia monitoring
- food diary
- abdominal ultrasound (when feasible)

As far as cKD compliance during a subverted clinical routine, no major problems emerged except for one patient with a well-known history of poor compliance, who had more difficulties in following the diet by spending more time at home. On the contrary, a marked improvement of compliance was observed for one young adult patient undergoing MAD, who found it easier to adhere to the dietary regimen because of reduced meals out of home.

Despite the reduction in physical activity that essentially affected all patients, no significant variation of ketonemia levels nor increase in weight parameters was registered.

Patients’ feedback regarding this follow-up via telemedicine was positive, and most families were pleased for not having to travel and risk their health.

In conclusion, we suggest to offer to patients and their families the opportunity to perform a follow-up visit in tele-assistance to provide clinical and treatment monitoring and to alleviate possible concerns as a bridge to the normal face-to-face clinic follow-up, which should remain the preferable practice when feasible.