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TOURETTE SYNDROME AND NUTRITIONAL IMPLICATIONS

Introduction

Tourette Syndrome (TS) is a neurodevelopmental disorder defined by multiple motor tics and at least one sound tic (1). Various behavioural symptoms associated with TS - especially obsessions and compulsions behaviours (OCBs), attention-deficit/hyperactivity disorder (ADHD) and poor impulse control (2) - have a high impact on patients' QoL (3), including eating attitudes and body image perception.

Rational

- Interventions for TS are observation, Habit Reversal Training, pharmacological therapy and, rarely, Deep Brain Stimulation.
- Nutritional implications, together with sleepiness and sexual asthenia, are the principal side effects of TS therapy. Actually, pharmacological therapy can compromise the nutritional status of TS patients producing appetite increase, dry mouth, constipation, glucose and lipid metabolism abnormalities, metabolic syndrome, mild transient dysphagia and nausea (4-6). In about 40% of TS subjects, a) side effects of drugs used in the treatment of the syndrome, together with b) OCBs, ADHD and poor impulse control lead to hyperphagia. Consequently, in these cases an overweight state can occur, complicating the management of the symptoms. Therefore, overweight is considered one of the most relevant factors increasing TS drug-related bad compliance, determining in some patients the interruption of drug-intake.
- Only few studies have investigated possible correlations among food, drinks, (7) supplements (8, 9) and TS symptoms because no nutritionists were included in Tourette teams: actually to date, no specific diet is recommended for TS patients. Anyway, following the principles of a healthy and balanced diet contributes to overall well-being and stress reduction (10). Moreover, in the choice of the diet, family eating habits should be considered, as well.
- Considering general health in TS, compulsions could also lead to tobacco abuse. If TS drugs can increase nutritional issues, TS drugs can vice versa treat tobacco abuse.

Objective

- Milan Tourette Centre experienced 10 TS cases with a compromised nutritional status, which have got worse due to medical treatments and/or due to the variability of TS symptoms. Considering this last factor, Luca –a 14 y.o. TS patient- was suffering from just tics in childhood, whereas in adolescence he developed nutritional OCBs.
- From January 2016, Milan Tourette Centre clinicians are studying the influence of different foods and drinks on TS patients, and the role that nutrition may have in controlling symptoms and mostly adverse side effects of pharmacological treatments.

The Centre has created a trial to include a nutritional support in the management of TS patients. Particularly, the Centre provides an ad-hoc diet for these patients, targeting it for the specific TS case (e.g. patients with only tics versus patients with tics and food-related OCBs).

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