

Clinical Challenge 2:

A 12 year old boy has attended the emergency department many times in the last 6 months with h/o bizarre behaviour, disorientation and excessive sleepiness. He got better after a period of observation in the observation unit and intravenous fluid therapy. He is well known to the gastroenterologists for the problem of short bowel syndrome. He had multiple bowel surgery in the neonatal period for multiple jejunal atresia and necrotising enterocolitis. He had resection of parts of his jejunum and remaining jejunum is anastomosed to ileum. His parenteral nutrition was stopped by his first birthday. He is on an unrestricted diet with nutritional supplementary drinks, which he takes most days of the week. There are no specific gastrointestinal symptoms and his growth continues to remain excellent. He is not on any medications. His parents are GP's in the region and there is no family history of neuropsychiatric conditions.

Physical examination done in these admissions did not show any specific clue to the diagnosis. He was reviewed by neurologists in the outpatient and there were no abnormalities in examination. CT head done in emergency department and also the MRI head done as requested by the neurologists were normal. His blood tests done at the time of emergency admission and also in between when he was well showed normal haemoglobin, platelets and white cell count, renal and liver function tests, blood gas, ammonia. Nutritional blood tests showed normal copper, zinc, selenium, ferritin, folate, vitamin B12.

What is the diagnosis?

Answer to Clinical Challenge 2

The correct answer is **Intra gastrointestinal alcohol fermentation syndrome**, also called auto-brewery syndrome. This boy's blood ethanol level checked in the most recent presentation was high. The boy denied any intake of alcohol. He was admitted and kept under strict observation. Still he continued to have bizarre behaviour and his blood ethanol levels were high on those occasions. A strong correlation between high ethanol levels and consumption of foods containing high carbohydrates was noted. He had upper gastrointestinal endoscopy and culture of duodenal aspirates showed *Candida* and *Saccharomyces*. After antifungal treatment his symptoms resolved completely.