

Intestinal iatrogenic hyperadaptation in patients with short bowel syndrome and Crohn's disease: Is this an indication for mandatory lifelong injections of teduglutide?

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Background and aims: Short bowel syndrome with chronic intestinal failure (SBS-CIF) is a rare disease leading to a markedly decreased absorption of fluids and nutrients. Intestinal adaptation in patients with SBS-CIF who are treated with home parenteral nutrition is a natural repair process activated by increased secretions of glucagon-like peptide-2, inducing intestinal trophism, nutrient transport, and lowering gastrointestinal motility. Teduglutide (TED), a glucagon-like peptide-2 analog, offers a new, effective therapeutic alternative to boost intestinal adaptation. There is still no consensus regarding the question of whether intestinal adaptation is permanent or a transient, drug-dependent process requiring lifelong injections of TED.

Methods: Here we report the clinical cases of two female patients with SBS-CIF secondary to Crohn's disease, who had received TED for 36 and 41 mo. In both patients, TED was discontinued for 5 d but needed to be resumed after an additional 5 d. In patient 1, the discontinuation of TED was accidental (the patient inadvertently injected frozen TED vials); whereas in patient 2, the suspension was at the patient's request.

Results: A rapid, significant ($P < 0.0001$) decline of intestinal function (diarrheal evacuations, fecal volume, food intake) was documented after the suspension of active TED in patient 1. After the resumption of active TED, the symptoms rapidly and significantly ($P < 0.0001$) improved. The same trend was observed in patient 2. Infective causes of diarrhea were ruled out in both patients.

Conclusions: In conclusion, our experience shows that even after long-term treatment, the iatrogenic hyperadaptation process obtained with TED results is a temporary, drug-dependent process and vanishes with the suspension of therapy. These clinical cases suggest that in patients with SBS-CIF receiving TED, this treatment must be administered lifelong.

Keywords: Crohn's disease; GLP-2-analog; Intestinal adaptation; Short bowel syndrome; Teduglutide.