

Gastroesophageal Reflux Disease in Young Patients with Cerebral Palsy: Surgical Treatment Options

Patoulias Dimitrios^{1*} and Patoulias Ioannis²

¹*Department of Internal Medicine, General Hospital of Veria, Veria, Greece*

²*1st Department of Pediatric Surgery, Aristotle University of Thessaloniki, General Hospital G. Gennimatas, Thessaloniki, Greece*

***Corresponding Author:** Patoulias Dimitrios, Department of Internal Medicine, General Hospital of Veria, Veria, Greece.

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Cerebral palsy (CP) is generally associated with decreased gastrointestinal motility, especially of lower esophagus [1,2]. Incidence of gastroesophageal reflux disease (GERD) in this group of patients reaches up to 70% [3]. Additionally, those patients suffer from scoliosis, which in fact affects the anatomy of esophagogastric junction [4]. They often exhibit generalized convulsions, which lead to increase in endogastric pressure and thus contribute to the occurrence of frequent episodes of gastroesophageal reflux [5].

So, prior to gastrostomy performance in those patients, a closer evaluation of the motility of the upper gastrointestinal tract should be conducted, in order to be assessed the need for an antireflux surgery. It has been estimated that 44 - 67% of all patients with CP benefit from the performance of antireflux surgical intervention [3].

Main indications for the surgical repair of GERD are: a) recurrent episodes of apnea, bradycardia, recurrent pneumonia, b) development of Barrett's esophagus, c) completion of an antireflux surgery with the conduction of a gastrostomy and placement of a feeding tube [6,7]. The essential indication for the conduction of a gastrostomy is the inability of the patient to swallow [8].

In many cases, gastrostomy performance precedes antireflux surgical intervention. In a study conducted by Wilson and colleagues, the authors document the substantial role of gastrostomy in the recession of GERD symptomatology in up to 68% of all patients [9]. Fourteen percent of the study group patients experienced improvement of their symptoms after gastrostomy and the addition of appropriate medication, while an antireflux surgery was required in 7% of all patients.

Thus, the authors suggest gastrostomy as a minimally invasive therapeutic intervention in young patients with CP, GERD and significant comorbidities. However, this practice is not widely accepted nowadays [10]. Besides, in patients with CP and GERD, a pre-existing gastrostomy does not facilitate the performance of fundoplication. In such cases, closure of the gastrostomy is required, in order an antireflux surgical procedure to be performed and after that, a new gastrostomy.

In complicated and severe cases, Bianchi., *et al.* [11] and Boubnova., *et al.* [12] described the total esophagogastric dissociation, performed both after laparotomy and laparoscopically, as a treatment option in those cases, in which other antireflux surgical interventions failed. Abdominal part of esophagus is intersected and esophagogastric junction is closed. Then, end-to-end jejuno-esophageal and end-to-side jejuno-jejunal Roux-en-Y anastomoses Roux-en-Y are conducted. The latter operation can be completed by the performance of a feeding gastrostomy, without any risk of GERD.

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