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Improvement on Intestinal Integrity in a Patient with Short Bowel Syndrome Parenterally Supplemented with Glutamine

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Romero-Domínguez Rocío², Cuevas-Asencio Irene¹, Abilés Jimena², Rivera-Irigoin Robin³

¹Servicio de Farmacia. Hospital Universitario Reina Sofía. Córdoba. España.

²Servicio de Farmacia y Nutrición. Hospital Costa del Sol. Marbella, Málaga. España.

³Servicio de Medicina Digestiva. Hospital Costa del Sol. Marbella, Málaga. España.

Email Id : rocioromdom@gmail.com

INTRODUCTION

The short bowel syndrome (SBS) is a reduced intestinal absorption characterized by the inability to maintain protein-energy, fluid, electrolyte or micronutrients balance. Therefore, macronutrient, water and electrolyte supplements are needed to maintain health and growth. Patients with SBS are heterogeneous in their disease phenotype, as a result of variable origins of their SBS state (obstruction, dysmotility, surgical resection or congenital defect) and also due to differences in length, anatomy, and health of the remnant intestine. The principal factor that increases mortality in these patients is the disability of the remnant intestine to adequately fulfill gastrointestinal functions. The main goal of intestinal rehabilitation is to restore enteral autonomy and improve quality of life by increasing the absorptive potential of the remnant intestine. The conventional treatment of the SBS is focused on achieving an early intestinal adaptation by optimizing the remnant bowel functionality and controlling excessive secretions in order to avoid the malnutrition and dehydration¹. Glutamine is an amino acid involved in metabolic processes and serves as a source of energy for some epithelial cells, especially enterocytes². Under stressful conditions its concentration falls and it turns into an essential amino acid.

Recent clinical trials of parentally administered glutamine supplementation show its safety when administered at the appropriate dose but there is inconsistent data regarding impact on outcomes³