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10368 editorial

Organization of Neurogastroenterology and Motility units with a multidisciplinary, patient-centered perspective

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Neurogastroenterology and Motility is a subspecialty within Gastroenterology that deals with the management of gastrointestinal (GI) motor diseases and disorders of gut-brain interaction (DGBI). Motor disorders include a large list of disturbances that may affect any segment of the GI tract, from esophageal motor disorders to ano-rectal motor disorders. The term DGBI replaced the traditional denomination "functional GI disorders" with the publication of Rome IV in 2016. This definition is more consistent

with the evolving understanding of the multiple pathophysiological processes that determine the development of these disorders, which include, in addition to altered motility, visceral hypersensitivity, microscopic inflammation, and impaired immune function, gut microbiota, or central nervous system processing (1).

The prevalence of GI motor diseases is highly variable; although chronic intestinal pseudo-obstruction is rare, constipation due to colonic inertia or Ogilvie syndrome is relatively common. DGBI are extremely prevalent conditions; the results of the Rome Foundation Global Study estimate that the prevalence of these disorders is around 40 % worldwide (2).

Annual direct costs derived from the care of patients with irritable bowel syndrome (IBS) is estimated at US\$1 billion in the United States (3), £1.3-2 billion in the United Kingdom (4), 3-4 billion euros in Germany, and US\$2 billion in China (5). In addition, they are associated with indirect costs due to absenteeism, presenteeism, and overall work productivity loss (6,7).

Unfortunately, because of the complex pathophysiological mechanisms underlying these disorders, there is no universally effective treatment for many of these patients. Satisfaction with the care received may be an indirect indicator of quality of care. According to the literature, a significant proportion of patients suffering these conditions are dissatisfied. This leads to repeated consultations and unnecessary explorations that result in a significant consumption of health resources (8). In addition, patients often search for non-medical alternative therapies. In this situation, the adoption of multidisciplinary, evidence-based approaches is necessary.

Patients with motor disorders or DBGIs may develop malnutrition due to severe motility dysfunction or disabling symptoms that are exacerbated by meals (9). On the other hand, DGBI are frequently associated with psychological and somatic comorbidities such as anxiety, depression, fibromyalgia or chronic fatigue (10).

Furthermore, GI symptoms may be the clinical presentation of psychiatric diseases such as eating disorders (11). Hence, it is necessary to promote a care model that guarantees a multidisciplinary approach within Neurogastroenterology and Motility units. Nowadays no quality standards or specific recommendations are available regarding these units.

Recent trials in Australia have shown that a patient-centered approach that includes medical treatment, dietary modifications, and behavioural interventions is the model with the greatest probability of success. Hence, in these studies 84 % patients in the multidisciplinary-care group versus 57 % patients in the standard-care group had global symptom improvement. At twelve months after treatment completion, integrated multidisciplinary clinical care resulted in a greater proportion of patients with improved symptoms, psychological status and quality of life, as well as reduced costs compared with gastroenterologist-only care (12,13).

According to this model of care, the initial approach by the gastroenterologist should include careful history taking and physical examination. Screening tests may be required to exclude organic diseases when alarm symptoms are detected (3). Besides this, a GI motility evaluation may be required in a subgroup of patients. Advances in the identification of specific motor dysfunctions allow to improve therapeutic management. Once a diagnosis has been established, the goal of medical treatment will be to relieve symptoms and reduce their impact on quality of life. However, available treatments, including prokinetics, spasmolytics or neuromodulators, often fail to achieve complete clinical remission (5). Therefore, it is important to inform the patient that pharmacological therapy is sometimes just one of the components of a multimodal approach.

In DGBI, patients often associate symptom onset or worsening with a meal. Often, the patient adopts dietary restrictions and food avoidance before being evaluated by a physician. A review published by the American College of Gastroenterology noted that up to 90 % of IBS patients exclude certain foods in the hope of avoiding or improving their GI symptoms (14). For this reason, a multimodal approach is required that includes dieticians for the control of nutritional status.

The dietary advice proposed by the National Institute for Health and Care Excellence (NICE) is a reasonable and simple initial approach. Specific trials have shown equivalent efficacy to that of a diet low in fermentable oligosaccharides, disaccharides, monosaccharides and polyols (FODMAP) in patients with mild symptoms (15). If general dietary advice fails, a low FODMAP diet is the most evidence-based dietary option (16). Augmentation of small intestinal fluids and colonic gas production is

allegedly the mechanism by which FODMAPs induce symptoms (17). This intervention involves three phases: withdrawal, reintroduction and personalization. The second and third phases are essential to individualize treatment and avoid unnecessary dietary restrictions with undesirable effects. Given its complexity, supervision by a nutritionist with a special interest in motor diseases and DGBI is recommended. Diets low in lactose or gluten may be considered in some patients under specialist supervision (9).

On the other hand, nutritional intervention is a cornerstone in the management of motor disorders such as gastroparesis or chronic intestinal pseudo-obstruction. Calorie-deficient diets were reported by up to 64 % of patients with gastroparesis due to lack of supervision of the dietary modifications introduced by patients themselves. When a patient with gastroparesis does not tolerate an adequate oral diet and has ongoing unintentional weight loss despite appropriate dietary recommendations, enteral or parenteral nutrition should be considered. In contrast, a significant number of overweight or obese patients with this disease have been described, suggesting the importance of further investigation on the implications of nutritional status in gastroparetic patients. The management of these motor disorders requires an interdisciplinary approach, with close collaboration between gastroenterologists and specialists in nutrition in order to supervise diet, control nutritional status, and intensify nutritional support, if needed (18).

In addition to standard medical care by a gastroenterologist and nutritional management, mental health constitutes another fundamental pillar for the successful management of these patients (5,9). If a coexisting eating disorder (anorexia, bulimia, binge eating disorder or ARFID) is suspected, a psychiatric evaluation is essential because restrictive dietary therapies are contraindicated in these patients (11).

In DGBI, the bio-psycho-social model explains the relationship between the multiple social, psychological, and biological factors involved in the development of symptoms (19,20). The presence of psychological comorbidities such as anxiety and hypervigilance is related to greater severity of gastrointestinal symptoms and worse response to therapy (21). Psychoeducation of the patient with DGBI is key to give insight on the relationship between psychological factors and gastrointestinal symptoms, and to provide the rationale for psychological treatment in these

conditions. The mental health professional must have specific training and knowledge on GI motor disorders and DGBI to assess the patient in an appropriate clinical context. The objectives of the psychological approach include identifying triggering factors, establishing a rational model of the disease, improving the response to stress, and modifying maladaptive psychological responses (22).

Behavioural therapies for DGBI include cognitive behavioural therapy (CBT), gut-directed hypnotherapy, interpersonal psychodynamic psychotherapy, and various relaxation techniques (9). The evidence supporting their safety and clinical benefits has become increasingly strong over the past decade. CBT-based interventions and gut-directed hypnotherapy have the largest evidence and are the most effective options in the long term (23).

Taking together all these evidences, Neurogastroenterology and Motility units should include a motility laboratory with gastroenterologist, nurse, and technician specialists in motility disorders, as well as at least one dietitian and a mental health professional with specific training in these disorders. These multidisciplinary units will allow coordinated care between different specialists in order to provide a precise diagnostic and therapeutic plan. The characteristics and organization of each unit will depend on the unit's location, the available resources, and the requirements of each centre.

In conclusion, disorders in the field of Neurogastroenterology and Motility are challenging and require a multimodal approach. In recent times, a growing interest in this topic has developed, even in non-scientific environments, with the emergence of unproven therapeutic alternatives. There is robust evidence in favour of dietary and behavioural interventions by specialized professionals, coupled with an appropriate medical evaluation and treatment by a gastroenterologist. Hence the importance to develop reference units in which comprehensive and individualized management can be offered. Multidisciplinary models improve clinical outcomes and patient satisfaction, which should result in a reduction of direct and indirect costs.

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