Measuring irritable bowel syndrome severity - What for and how?

Irritable bowel syndrome (IBS) is the most common cause of consultation in the clinical practice of gastroenterology, and a significant health issue given its chronic nature and interference with health-related quality of life (HRQOL), which patients perceive as moderate to severe. It is characterized by abdominal pain and distension associated with disordered bowel habits (diarrhea, constipation, alternating habit) that persist or relapse for many years, starting during early youth in a proportion of patients. In 20-30% of cases disease onset is related to a recent history of acute, usually bacterial gastroenteritis. It allegedly affects 11-15% of the adult population—depending on the various diagnostic criteria used—mainly between 18 and 65 years of age, and is 2-3 times more common in women than in men, albeit this is not the case in all countries (1-3).

This is a chronic disorder and fewer than 10% of patients remain asymptomatic at ten years after diagnosis. While the disorder does not impair patient survival, its relapsing character and severe impact on all HRQOL dimensions, primarily vitality, work, leisure, traveling, and social interactions, lead to a greater impairment of daily living as compared to other chronic conditions such as migraine, osteoarthritis or COPD, or even digestive conditions such as daytime GERD, ulcer disease or remitting CIBD, but not panic disorder or rheumatoid arthritis (3). Furthermore, it impairs HRQOL more deeply in female subjects than in male patients, and symptoms have been reported to correlate with menstruation or hormone replacement therapy. HRQOL has been shown to be further reduced under three primary circumstances: female gender, severe digestive or extradigestive symptoms, and a longer time elapsed since diagnosis (4). Suffering from psychological disorders (5), comorbidity between IBS and functional dyspepsia (FD) (6), the relatively common association of nausea, heartburn, chest pain, and epigastric pain (7), the presence of a positive family history for any other digestive functional disorder, and symptom onset during childhood or adolescence (8) would all add a significant impact on the subjectively perceived health status, which might suggest the potential relevance of “learned behavior”. All the above leads to self-medication, and a common recourse to complementary and alternative medicine (9).

An interesting study (10) of nearly 2,000 patients (83% females) recruited online in Canada and USA suggested that patients have a yearly average of 73 days with restricted physical activity, and that 35% of patients have their HRQOL impaired. This was correlated with five items: reduced daily activities, dietary restrictions, lower physical endurance, bowel habit changes, and impaired sleep and night rest. Patients were relatively young Caucasian subjects with high-level education, and complained about persistent symptoms, which led to more days on sick-leave or even job loss.
During the long-term course of IBS extradigestive symptoms (asthenia, adynamia, myalgia, mental fatigue, and body hypervigilance) play a most relevant role in the debasement of SF-36 physical and mental component scores. The contribution of the psychological profile, particularly regarding anxious-depressive components (even if relatively modest), is significantly associated with higher symptom severity and a less favorable course, as reflected by a higher number of clinical visits, more days off work, and increased use of drugs (including OTC medicines) (11). As with migraine, arthralgia, chronic low-back pain, diabetic neuropathy and fibromyalgia, numeric scales to quantify abdominal pain in patients with IBS help to objectively assess syndrome severity and facilitate therapy response monitoring (12).

IBS carries a good “quod vitam” prognosis and a life expectancy similar to that of healthy subjects or patients with other benign conditions. The problem lies in the worsening life status of these patients, occasionally stricken by disabling symptoms. Besides abdominal complaints, many patients report extradigestive symptoms including musculoskeletal symptoms or chronic asthenia, in addition to IBS-related fears and concerns. In the absence of biological markers, severity has been usually established according to the judgment of each attending physician, which entails a relevant degree of subjectivity as it depends on his or her experience and expertise. Classifying patients appropriately according to syndrome severity is very important in order to establish an adequate tailored therapy, to assess response and efficiency, and to define prognosis from the outset. If needed, access may also be gained to other restricted-use therapies such as alosetron or tegaserod (not available in Europe) as per rules established by the FDA in USA (13), since—as Spiegel et al. aptly put it (12)—“A complete assessment of perceived severity should consider both poles in the brain-digestive axis”.

Nearly 20 years ago Drossman and Thomson (14) already posited a positive diagnosis from the medical history, minimizing complementary tests; they established a prognostic and therapeutic outlook of IBS based on patient-reported—albeit physician-measured—symptom severity. They considered that 70% of cases were mild, 25% were moderate, and only 5% were severe. More recent studies, however, have shown that the prevalence of severe disease is higher. It is estimated that at least 20-30% of patients suffering from IBS are referred to specialists, and those classified as “severe” approximately equal in numbers the total of CIBD patients for a given population (15). This syndrome can no longer be considered a trivial disease, nor is it a psychosomatic disorder. In addition, the diagnosis of IBS should not be looked upon as an exclusion diagnosis, which greatly increases costs, but as a positive diagnosis based on guidelines such as Rome III. These have been almost completely endorsed by specialist care practitioners, and completely adopted by expert reports, but not so much in primary care (16).

A primary issue with IBS is HRQOL impairment: social restrictions, reduced physical activity, absenteeism, and a feeling of chronicity, since there is no definitive healing therapy. IBS severity has been posited to be a multidimensional concept including quality of life, psychosocial factors, use of health services (primary and specialist care), whether as emergencies or otherwise, unforeseen therapy changes and discontinuations, etc. Assessing or quantitizing symptoms (both digestive and extradigestive) requires an understanding of IBS “severity” from each patient’s perspective—there is on the one hand “a severity of disease”, perceived by physicians and usually mild to moderate in this setting, as it predisposes to no acute or chronic organic condition, and on the other hand a “severity of symptoms”, perceived by patients, varying from one individual to the next, which may range from mild to overtly dis-
HRQOL scales may be generic as SF-36, or specific; the latter assess specific aspects of the involved syndrome or disease. Two main scales attempt to quantify IBS severity: the Functional Bowel Disease Severity Index (FBDSI), which only assesses three variables (current pain, chronic abdominal pain, and number of physicians visited in the past 6 months, and the Irritable Bowel Syndrome Severity Scale (IBSSS), which is more comprehensive). Using FBDSI as a severity marker in 64 patients with IBS (70% women) versus 52 controls (65% women) thermal hypersensitivity was shown in all IBS groups (constipation or diarrhea), and such hypersensitivity correlated to severity as measured with said scale (17).

Using IBSSS as a severity marker, Spiegel et al. (13), in a group of 749 patients (90% with ages between 32 and 60 years, 68% females), found an average of symptom severity of 11.8 ± 4.4 (maximum allowed, 20). Most interestingly, three categories among those behaving as independent severity markers stood out: a) abdominal pain and distension; b) defecatory stress, rectal tenesmus, and diarrhea; and c) psychological symptoms (particularly disease-related fear rather than anxiety or depression), extradigestive symptoms, and myalgia. In contrast, measuring overall HRQOL using SF-36 was not deemed a severity marker. It has also been shown –using IBSSS– that 18% of patients included in an RCT met severity criteria, and this led to poorer responses to any previous therapy (18); interestingly, consistent psychological symptoms were not seen to correlate to treatment response.

Finally, another approach to assessing symptom severity is the use of “Patient-Reported Outcomes” (PROs), which include 35 categories covering five domains: pain, abdominal gas/distension, diarrhea, constipation, and extradigestinal symptoms (19); this frame of questions meets FDA recommendations, providing self-perceived symptoms and severity, to establish rational treatment plans. Correlation is also good with IBSSS and the generic instruments for HRQOL measurement. Given their complexity, they are only used in prospective RCTs under specific research circumstances.

As a group, women with irritable bowel syndrome have a physical and mental HRQOL lower than that of women with no IBS, and of the whole female population in the USA. What explains this reduced HRQOL does not seem to be correlated with abdominal or digestive symptoms but rather with psychological or psychiatric comorbidity, particularly anxiety or depression (20). Other authors, in contrast, have seen that the overall feeling of distress associated with abdominal pain or discomfort is more consistently related to IBS severity than intestinal habit patterns, whether constipation, diarrhea, or both alternating. They have reported that patients with more severe or frequent abdominal pain have greater psychological distress, discontinue daily activities more often, and show a poorer HRQOL. Thus, they suggest the need to include abdominal pain severity measures in IBS diagnostic criteria, as it interferes with social, work, and daily activities to a higher degree as compared to any stool pattern (21).

The stratification of patients with IBS according to “gravity” (a term derived from Latin “gravis”, heavy, meaning important or significant) or “severity” is of paramount importance because of four reasons (13): a) it helps design tailored therapies according to severity; b) in the absence of an objective IBS marker, clinical course is reflected by patient-reported severity; c) access to restricted IBS therapies, including alosetron or tegaserod, requires that more symptomatic or severe cases be screened beforehand; and d) regulatory agencies such as the US FDA question responses such as “adequate relief” or “satisfactory relief”, and ask researchers to analyze patient responses in a multidimensional way (22). To accomplish all this researchers first
need to understand what determines that a patient will consider his or her IBS as ‘severe’ from his or her own standpoint.

In this respect the paper by Dr. C. Almansa et al. (23), from the Gastroenterology Department at “Hospital Clínico de San Carlos” (Madrid), published in this issue of the Spanish Journal of Gastroenterology, is a timely report. The study design (based on IBSSS), an accurate Spanish translation, and the assessment of survey understanding, reproducibility and applicability render this tool key for clinicians and investigators alike given its suitability and user-friendly nature. It is also consistent with a classic medical aphorism: “Let your patient speak; he will tell you what is wrong with him”. The possibility of repeat administrations, given its brief nature, also adds to its ability to identify relevant changes, which may in addition be quantified in terms of improvement or otherwise according to the scores obtained before and after treatment. This is a simple, yet terrific tool for the diagnosis and treatment of patients with IBS. This study is a key contribution to the diagnosis, stratification, and management of these patients, and a great aid for all clinicians and investigators committed to functional digestive disorders, whether primary or specialist care.

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