

Quality of Life of Patients with Irritable Bowel Syndrome

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Abstract: Irritable bowel syndrome (IBS) is defined by the association of abdominal pain and transit disorders for long periods of time, with a recurrent evolution. Its high prevalence and its undeniable impact on the quality of life of patients make it a real public health problem. Although it remains a diagnosis of elimination, IBS is one of these benign pathologies, which induce significant health costs and an undeniable impact on the quality of life of patients. The objective of this work is to evaluate the impact of the disease on the quality of life of patients, and to appreciate their relation to their family, social and working environment, with a view for a better support. This is a prospective observational study for descriptive purposes in a sample of the Moroccan population (the southern region). 892 people responded to a questionnaire based on the Rome IV criteria, and then, 296 of them, diagnosed with IBS, responded to a second questionnaire to evaluate their quality of life. We used the medical outcome study short form (According to MOS SF-36 Health Survey) which assesses 8 dimensions of health. The analysis of indirect costs, more delicate, was mainly based on the evaluation of the number of days off work and the deterioration in presenteeism caused by the disease in people with paid professional activity. The average age of our participants was 41.6 years with extremes ranging from 18 to 86 years, a clear predominance of women was noted with a sex ratio = 0.5. The majority had an average economic level (62%). Symptoms were chronic and had progressed on average for 103.2 ± 59.2 months. Abdominal pain was noted in all patients. Constipation was seen in 68% of our patients, while 52% of them reported episodes of diarrhea. Most of the patients had an improper lifestyle determining a statistical link ($p = 0.0001$) between diet and functional colopathy. Stress was present in 43% of patients with a significant correlation ($p = 0.059$). When the quality of life deteriorates, the scores for all areas of the SF-36 are lower than those observed in the general reference population (French population), with a significant statistical link ($p = 0.0001$). Indirect costs are first represented by work stopping induced by more frequent surgical procedures in patients with IBS, whose impact remains difficult to evaluate, unlike work-stopping that is related directly to the disease, which is easier to analyze. Although The IBS don't disturb the vital prognosis, it is a recurrent chronic disease that is often associated with impaired quality of life. The chronicity of the disorders generates economic and socio-professional repercussions with absenteeism and a reduction in work performance. the medical profession must improve the care of people suffering from IBS by giving more information about the disease, answering patients' questions, showing empathy and support, being more attentive, and having more positive speech.

1. Introduction

Irritable bowel syndrome (IBS) is defined by the association of abdominal pain and transit disorders for long periods of time, with a recurrent evolution. Its prevalence is high and its undeniable impact on the quality of life of patients makes it a real public health problem [1] [2]. Although there remains a diagnosis of elimination, IBS is one of these benign pathologies, which induce significant healthcare costs and an important impact on the quality of life of patients. The absence of a well-defined physiopathological marker leads sometimes to excessive mobilization of health resources and the increasing of the cost of this pathology. This cost is in practice difficult to evaluate because of its different components. The objective of this work is to determine the epidemiological factors, the symptoms predominantly in IBS, to evaluate the impact of the disease on the quality of life of patients, and their social experience with their family, and working environment, with a view for a better support.

2. Patients and Methods

This is a prospective, descriptive and observational study in a sample of the Moroccan population (the southern region). 892 people answered a questionnaire based on the criteria of Rome IV, then, 296 patients among them, diagnosed with IBS, responded to a second questionnaire for an evaluation of their quality of life, their consumption of care as well as

the different schemes used. All patients over 18 years of age with IBS defined according to the Rome IV criteria, and having a strictly normal clinical examination. Excluding, however, patients with symptomatology of IBS dating less than 3 months, those with organic pathology of the intestine, or with comorbidity (kidney, heart disease, and diabetes), pregnant women and / or breastfeeding, and any pathology that may mimic intestinal symptoms. To carry out our work, an exploitation sheet, chosen as a way of exploitation, including epidemiological, clinical, Para-clinical, therapeutic variables, as well as an evaluation of quality of life. We used the medical outcome study short form (According to MOS SF-36 Health Survey) which evaluate 8 dimensions of health: physical activity (FP), life and relationships with others (SF), physical pain (BP), health perceived (GH), vitality (VT), limitations due to physical (RP) and mental state (RP) and mental health (HD). For each scale, a score varying from 0 to 100 is obtained, scores tending towards 100 indicating a better quality of life. From these 8 scales, it is possible to calculate two synthetic scores which have been identified by factor analysis: an aggregated physical health score and an aggregated mental health score. The analysis of indirect costs was very delicate and mainly based on the evaluation of the number of non working days and on the alteration of presenteeism caused by the disease in people with paid professional activity. The data collection was documentary, based on direct interview. Statistical analysis was performed using SPSS version 19.0 software. A bi-varied study was carried out using the EXCEL program and the XLSTAT

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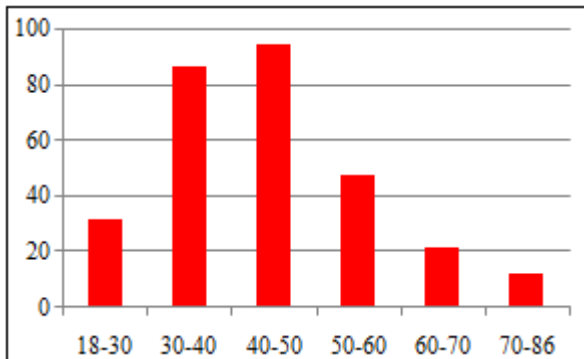
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software. Variables whose association was significant at the 20% threshold in bi-varied analysis were included in a multivariate model. The significance threshold was retained for a $p < 0.05$. Anonymity and data confidentiality was respected.

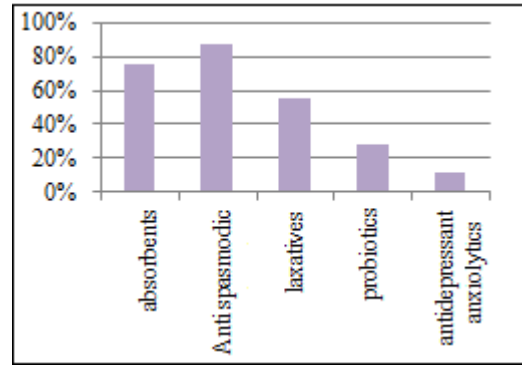
3. Results

In our study, only 296 patients answered the inclusion criteria out of 892 patients, so a frequency of 33%, with 36 patients excluded because of their pathological history. The average age of our participants was 41.6 years with extremes ranging from 18 to 86 years, and a frequency peak between 30 and 50 years (**Figure 1**).



A clear predominance of women was noted with 176 women (59%), 120 men (41%), a sex ratio (men / women) = 0.5. The majority had an average economic level (62%), a different marital status (69% married, 19% single, 8% divorced). 48.3% of our patients joined a mutual, 20.6% benefited from the Medical Assistance Plan (RAMED) while 31.1% had no medical coverage. Symptoms were chronic and had progressed on average for 103.2 ± 59.2 months (or 6.5 years on average). Abdominal pain was noted in all patients, with an average severity of 51 ± 18.3 (scoring out of 100). 82.9 of the patients reported abdominal bloating with an average severity of 8.4 ± 11.9 and an average frequency of 3.1 days in the last 10 days. All had the meal as a triggering factor.

Constipation was seen in 68% of our patients, while 52% of them reported episodes of diarrhea. Most patients had an improper lifestyle, 172 cases so 58.1% preferred fast foods, 182 cases had irregular physical activity, so 61.4%, and 87 cases had toxic habits, so 29%, determining a statistical link ($p = 0.0001$) between diet and functional colopathy. Stress was present in 43% of patients with a significant correlation ($p = 0.059$), followed by sleep disorders with a percentage of 26%, then anxiety disorders in 23% of cases and 8% of our patients were depressed. When the quality of life deteriorates, the scores for all areas of the SF-36 are lower than those observed in the general reference population (French population), with a significant statistical link ($p = 0.0001$). The evaluation of the drug intake showed that Coprescriptions were the most frequent. Patients took an average of 2.5 different drug classes to improve their symptoms (**Figure 2**).



In addition, it was noted that 12% of the patients were receiving psychological treatment. Satisfaction with these approaches (drugs and food probiotics) remains average. However, and in spite of significant expenses, a good number of patients remain insufficiently relieved with an average satisfaction rating of the different drug classes used varied between 3.42 and 6.28 / 10. Food probiotics were no better, with an average satisfaction rating of 6.3 / 10.

Indirect costs are first represented by work stoppage induced by surgical procedures that are more frequent in patients with IBS. Their impact remains difficult to evaluate, unlike the damage related to the pathology, which are easier to analyze. In our study, 66% of patients with IBS having a paid professional activity stopped working because of their affection at least once during the last twelve months (with an average of 2 days on the last year). On the other hand, among the patients with a paid professional activity, 2 out of 5 patients estimated to have difficulties in their work related to the symptoms of the disease.

4. Discussion

Irritable bowel syndrome (IBS) refers to all of the chronic manifestations for which no lesion, infectious or metabolic abnormality is revealed by the usual examinations, generally associating transit disorders, abdominal pain and abdominal bloating. The diagnosis of IBS is based on clinical criteria which have evolved over the years: The Manning criteria (1978), the Krüss criteria (1984) and then the Rome I, II and III and IV criteria. Originally considered as a purely motor disorder, IBS has become a multifactorial condition involving several mechanisms [3] [4].

Estimates of prevalence of IBS vary internationally, both within the same country and between countries. According to data from a meta-analysis, the overall estimate of the international prevalence of IBS is 11.2% [5]. In Morocco, data are not available due to lack of epidemiological studies in the general population. In our study, the prevalence was around 33% in a sample of 892 patients. The average age of our participants was 41.6 years with a peak frequency between 30-50 years. The rate of IBS in women is around 1.5 to 3 times higher than that seen in men [6] [7]. In fact, most studies in Western countries have shown that IBS affects women more than men [8]. Similar results have also been found in region of MENA [8].

In our study, the sex ratio (M / F) was 0.5, in favor of women, comparable to those of the Malian series [8] and of

coffin [6] which were respectively 0.57 and 2/1, and also to that of the Iranian series of Gholamrezaei et al [9] where the sex ratio was 4, 4. This finding is generally explained by the particular biological profile of the woman who is more emotional. Our series has shown that there is a significant association between IBS and a set of factors that seem to be determining (female, psychological stress). These results highlight the need for other studies in order to characterize all the factors, in particular the possible relationships between diet-related practices and the risk of IBS, in order to design an intervention based on an appropriate and effective diet [10].

The severity of the pathology generally causes a very significant deterioration in the quality of life. The latter can be evaluated according to general questionnaires, type SF 36, or specific questionnaires, such as IBS QoL [2]. It has been compared with patients with authentic organic pathologies and with the quality of life of normal subjects belonging to the general population [2, 18, and 19]. Whatever the questionnaire used, whether general or very specific to the pathology, each time a very significant deterioration in the quality of life was demonstrated in patients with IBS. The dimensions of quality of life, which are disrupted by IBS, are of course basic daily activities, but also eating habits, sex life and professional activities. In our series, 36.7% of IBS patients felt that their quality of life was not satisfactory. This deterioration in the quality of life is significantly correlated with the intensity of the symptoms [21, 22]. Research has allowed comparing the deterioration in the quality of life observed during IBS to the quality of life of patients suffering from chronic renal failure [11], diabetes, which are chronic pathologies, but also influenza which is a short duration acute pathology [5].

In our study, 43%, 23%, and 26% of our patients, respectively, experienced stress, anxiety and sleep disturbances. As for Sproudhis et al [23], they found that 32.4% of patients regularly took anxiolytics. On the other hand, these percentages were a little higher compared to those of the Malian series [13] which were respectively 3.8% and 19.2%. The exact mechanism of how psychological stress induces abdominal symptoms has not been elucidated, despite numerous studies reporting a two-way relationship between the central nervous system and the digestive tract [24].

When taking medication, therapeutic approaches can therefore only be based on symptomatic treatments. In a French study, over a period of one year, patients took an average of 4.8 different IBS drugs [25]. Satisfaction with these approaches remained poor for many patients since only 24 and 15% of them said they were completely relieved of their abdominal pain and constipation respectively. In our study, the average satisfaction score for the different drug classes used varied between 5.4 and 6.3 / 10. Thus, and despite significant expenses, many patients remain insufficiently relieved. To the weight of direct costs on health resources must be added the indirect costs represented essentially by work stopping induced by the pathology. A study carried out in France showed that around 10% of working subjects who present with IBS according to the Rome II criteria, had benefited from a sick leave, at least

once in the year preceding the study [5]. A second study found an absence rate of 12.1% in the last 6 months [24]. A more recent Canadian study revealed a rate of 5.6% of work stoppages in the year preceding the study [26], while in a German study there was a rate of around 30% [27]. This absenteeism rate was higher in our study, where about three-quarters of paid workers had lost time related to their illness in the last 12 months. The duration of the absences was however shorter: 3 days on average over the last twelve months.

The other side of the relationship between work and IBS is the disruption of presenteeism. Intuitively, it seems acceptable to consider that a subject with abdominal pain or transit disorders can be hindered in his professional activity, without being off work. An American study [27] has shown that patients with IBS have a decrease in work efficiency and that difficulty in working is well correlated with the severity of the symptoms.

Irritable bowel syndrome is comparable to asthma or migraine in terms of the indirect costs associated with absenteeism or disrupted presenteeism. In our study, 75% of patients with IBS felt that they were embarrassed by their symptoms during their professional activities.

The measurement of the economic gain likely to be brought by therapeutic approaches is much more difficult. There are still too few pharmaco-economic data evaluating the potential gain from treatments. Two studies have been carried out showing that "Tegaserod" (before it was withdrawn from the market for potentially serious side effects) could reduce the problems of absenteeism, presenteeism and reduced efficiency at work. A single study with the same molecule showed a reduction in the use of health resources essentially by reducing the number of hospitalizations, consultations and scans performed [28].

5. Conclusion

Although IBS don't threaten the vital prognosis it is a recurrent chronic disease that is often associated with impaired quality of life. In our study of a sample of the Moroccan population, the prevalence of irritable bowel syndrome was 33%.

In fact, most of the patients have had disorders for several years, requiring several consultations with very often expensive explorations and treatments. The chronicity of the disorders generates economic and socio-professional repercussions with absenteeism and a reduction in work performance. the medical profession must improve the care of people suffering from IBS by giving more information on the disease, answering questions from patients, showing empathy and support, being more attentive, and having more positive speech.

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