Risk factors of psychological disorders in inflammatory bowel disease in a Tunisian survey. Results of a cross-sectional study.

Facteurs de risque associés aux troubles psychiques au cours des maladies inflammatoires chroniques de l'intestin. A propos d'une étude Tunisienne transversale.

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RÉSUMÉ

Prérequis: La fréquence des troubles psychopathologiques, en particulier l'anxiété et la dépression serait majorée au cours des maladies inflammatoires chroniques de l'intestin (MICI). Cependant, les facteurs associés à leur survenue ne sont pas complètement identifiés et peuvent varier en fonction de la population d'origine. Les objectifs de ce travail étaient de déterminer la fréquence de l'anxiété et de la dépression au cours des MICI et de rechercher les facteurs associés à la survenue de ces troubles.

Méthodes : Etude transversale menée de Juin 2012 à Avril 2013 incluant 60 patients consécutifs atteints de MICI. Nous avons précisé les caractéristiques cliniques, évolutives et thérapeutiques des MICI puis demandé aux patients de répondre à un questionnaire concernant les facteurs socio-économiques. L'anxiété et la dépression ont été évaluées par l'échelle HADS (Hospital Anxiety and Depression Scale). L'analyse comparative des groupes selon l'existence d'un trouble psychique a été réalisée à l'aide du logiciel SPSS, le seuil de significativité était de 5%.

Résultats : 25 étaient anxieux (41,6%), 4 étaient dépressifs (6,6%) et 12 avaient un score en faveur d'une anxiété probable. En analyse univariée, les patients ayant un trouble psychique étaient plus souvent de sexe féminin avec un niveau d'étude supérieur, plus souvent locataires que propriétaires de leur logement et avaient une MICI de type rectocolite hémorragique. En analyse multivariée, les facteurs prédictifs indépendants associés aux troubles psychiques étaient le sexe féminin (p=0,005 ; OR 11,3), et le niveau d'étude supérieur (p=0,004 ; OR 12,1).

Conclusion : Le sexe féminin et le niveau d'étude supérieur sembleraient favoriser l'anxiété et la dépression. Ces résultats devraient justifier l'intégration systématique d'un psychologue dans la prise en charge de ces patients.

Mots-clés

anxiété, depression, facteurs de risque, maladie inflammatoire chronique de l'intestin

SUMMARY

Background: Little is known in inflammatory bowel disease (IBD) regarding risk factors for psychological distress. The aims of our work were to evaluate the frequency of anxiety and depression among patients with IBD and to determine the factors associated with these psychological disorders in Tunisian patients.

Methods: From June 2012 to April 2013, 60 consecutive patients with IBD answered a questionnaire about psychological and socioeconomic factors and adherence to treatment. In this study we focused the analysis on the characteristics of IBD (type, localization, severity, treatment) and socioeconomic factors (professional, educational, and marital status). Anxiety and depression were assessed by the Hospital Anxiety and Depression Scale (HADS).

Results: According to the HADS, 25 patients (41.6%) were anxious while 4 (6.6%) were depressed. Three had anxiety and depression at the same time. Twelve patients had a probable anxiety, 2 patients had a probable depression and 3 patients had a probable depression and anxiety at the same time. By univariate analysis, factors associated with anxiety and depression were: female gender ($p<0.03$), rent ($p<0.03$), high school graduation ($p<0.009$), IBD type ulcerative colitis ($p<0.05$). By multivariate analysis, independent factors associated with these emotional disorders were: female gender (p=0.005, OR 11.3), the high school graduation (p=0.004, OR 12.1).

Conclusion: In our cohort, risk factors for anxiety and depression were the high school graduation and IBD type ulcerative colitis. Consequently, psychological interventions would be useful when these factors are identified.

Key-words

Anxiety, depression, risk factors, inflammatory bowel disease

Inflammatory bowel disease (IBD) is an idiopathic chronic disease that affects around 28 million people worldwide [1-2]. The impact of their symptoms, can adversely affect patient's quality of life, impacting them psychologically, socially, educationally and vocationally. Psychiatric comorbidity is common in IBD: evidence suggests that a high proportion of IBD patients suffer from anxiety and depression, a percentage that is more than double when compared to healthy population [3]. There are several possible explanations for this comorbidity. However, little is known in IBD regarding risk factors for this psychological distress, especially in Tunisian patients.

The aims of this study were to evaluate the frequency of anxiety and depression among patients with IBD and to determine the disease characteristics and socioeconomic factors associated with these emotional disorders.

METHODS

1. Demographic, socioeconomic and disease characteristics:

A total of 60 patients with IBD who were admitted or outpatients seen in the department of Hepato-gastro-enterology of Mongi Slim University Hospital between June 2012 and April 2013 were consecutively analyzed and included in this study. All patients answered a questionnaire about psychological and socioeconomic factors (professional, educational, and marital status) and adherence to treatment.

The assessment of adherence to treatment >80% was considered satisfactory. We focused the analysis on the characteristics of IBD (type, disease duration, localization according to Montreal classification, anoperineal lesions, severity, surgical and medical treatments). Patients receiving psycho pharmacotherapy and those with known or evident psychiatric disorders were excluded.

2. Assessment of psychological disorders:

Anxiety and depression symptoms were measured with the Hospital Anxiety and Depression Scale (HADS) which is a 14-item self-report scale providing separate subscale scores for anxiety (HADS-A) and depression (HADS-D) [4]. Optimal balances between sensitivity and specificity have been achieved most frequently when a cutoff of 8 or higher is used for both anxiety and depression symptoms, yielding sensitivities and specificities of 80% for both subscales [5].

Each item is rated on a 4 point scale, giving max score of 21 for anxiety and depression. Scores of 11 or more on either subscale are considered "significant" cases of psychological morbidity, while scores of 8-10 represent "border line cases" and 0-7 "normal" cases.

3. Statistical analysis:

The data was summarized by descriptive statistics (means and frequencies) and analysed with SPSS version 19. Data are shown as percentage, mean and standard deviation (SD). Differences in proportions were analyzed by chi-square or Fischer test; differences in mean quantitative value were analyzed by student's t-test. P value less than 0.05 was accepted as statistically significant. Multivariate logistic regression analysis was performed to individually identify risk factors for depression and anxiety.

RESULTS

Patients and disease' characteristics and phenotypes of the disease

Sixty patients (24 men and 36 women), with an average age of 37.2 years ±11.9 (extremes from 18 to 65 years) were consecutively included. The demographic characteristics of the population are shown in table I. They were 75% Crohn disease (CD) and 25% ulcerative colitis (UC).The disease mean duration was 6.1 years [1-27]. The localization of the CD was ileal in 7 cases (15.5%), ileocolic in 28 cases (62.2%), colonic in 10 cases (22.2%) and isolated upper gastrointestinal tract in one case (2.2%). The most common behavior of the disease was the inflammatory type (44.4%) and the stricturing type was observed in 33.3%. The penetrating type was observed in 22.2% of the patients. Perianal disease was noted in 6.6 % of the patients. The localization of ulcerative colitis was distal in 2 cases and extensive in 8 cases. One third of the patients took 5-aminosalicylates, 20 % corticosteroids, 15% immunosuppressant and 6.6% anti-tumor necrosis factor alpha [TNF_{α}]. Twenty one percent of patients had surgery. The satisfactory adherence to treatment was observed in 86.6%. The disease was in remission in 35 cases (58.3%) and active in 25 cases (41.7%).

Table 1 : Population socio-demographic characteristics

Socio-demographic characteristics	n=60	Percentage (%)
Gender		
Female	36	60
Age at diagnosis (years)	37.2 (+/-11.9)	-
	15	25
Smoker		
Education level		
-no education	3	5
-primary education	10	16.6
-secondary education	16	26.6
-university education	31	51.6
	40	
Rent		66.6
Marital status		
- married	32	
- engaged	20	53.3
- single	8	33.3
		13.3
Children:	32	
-yes		53.3
Employment status:	40	
-employed	15	
-unemployed	5	66.6
-student	6.1 (+/-6.7)	25
Disease duration in years		8.4
		-

Frequency of psychological disorders (table II)

Four patients (6.6%) were depressed (HAD depression scale >11), 25 patients (41.6%) were anxious (HAD anxiety scale >11). Three of them had scores in favor of anxiety and depression at the same time.

Twelve patients had a probable anxiety (HAD depression scale: 8-11), and 2 patients had a probable depression (HAD anxiety scale: 8-11). About six percent (5.9 %) had a probable anxiety with a probable depression.

Table 2 : Prevalence of psychiatric disorders in inflammatory bowel disease

	HADS score	n	Percentage (%)
Anxiety	>11	25	41.6
Depression	>11	4	6.6
Probable anxiety disorder	8-11	17	28.3
Probable depression disorder	8-11	7	11.6
Probable depression and anxiety	8-11	3	5.9

HAD: Hospital Anxiety Depression Scale

Predictors of psychological disorders (table III)

We studied risk factors associated with psychological disorders, including anxiety and/or depression. Univariate analysis disclosed 4 predictive factors of psychological disorders: female gender (p<0.03, OR 5.3; CI [1.24-22.8]), rent (p<0.03, OR 4.5; CI [1.14-18.2]), high school graduation (p<0.009, OR 7.2; CI [1.4-37.4]), IBD type UC (p<0.05). There was no difference in the risk of anxiety or depression regarding age, disease duration, prior surgery, disease activity, type of treatment, observance to treatment and unemployed status.

By multivariate analysis, independent factors associated with emotional disorders were: female gender (p=0.01, OR 11.3 CI [1.65-46.47]), the high school graduation (p=0.008,OR 12.1; CI [1.92-73.62]).

Table 3 : Factors associated with anxiety and depression

Variables	P
Female gender	0.03
Age at diagnosis	NS
Marital status	NS
Smoker	NS
High level school	0.009
Unemployed status	NS
Disease duration	NS
Ulcerative colitis	0.05
Rent	0.03
Prior surgery	NS
Disease activity	NS
Type of treatment	NS
Observance to treatment	NS

NS: non significant

DISCUSSION

In our cohort, we identified that high school graduation and IBD type UC were independant risk factors for anxiety and depression. Moreover we found a high frequency of anxiety (40%) and a low rate of depression (6.6%).

There are some controversies about the comorbidity of anxiety and/or depression in IBD patients. While some researchers such as Cran et al, Guthrie et al, Helzer et al, found no evidence of any association between these psychiatric disorders and either UC or CD, others confirmed that depression and anxiety are more common in IBD patients [6-10]. In the Tunisian study of Karoui and al, the total score of "the general health questionnaire" was significantly higher in inflammatory bowel disease patients compared to control group [11]. However the "general health questionnaire" detect only psychological morbidity but does not assess the type of psychological disorder as the HADS that we have used in the present study [11]. As we verified in this current study, the anxiety was more prevalent than depression in IBD. Indeed, we found a high frequency of anxiety and a low frequency of depression around 7%. The frequency of depression that we observed in our study is lower than reported in another Tunisian study including 50 patients with IBD which was estimated to be 44% [12]. Our results were close to the reported prevalence by others Australian, French, German and Italian studies (rates ranging between 37% and 80%) and higher than observed in a representative national survey of the French adult population which was estimated to be 21.6% [6,13-16]. Moreover, others studies have reported higher rates of psychiatric disorders in IBD compared with others chronic illnesses or healthy controls [4-6]. There are several possible explanations for the co-occurrence of the two psychiatric disorders and IBD [17]. Firstly, IBD might predispose people to depression and anxiety. Secondary, these different pathologies could share a common environmental, behavioral or genetic etiology [18]. . Finally, the two conditions might co-occur through a related factor such as treatment.

Little is known regarding risk factors for psychological distress, particularly in our population. In our study, the female gender was found as a predictor factor of anxiety as it has been reported in others studies [4,5,8-10]. The high school graduation was also associated with a higher risk of mood disturbance. Indeed, it has recently been demonstrated that better disease specific patient knowledge is associated with higher anxiety levels [19]. Educating patient about their disease might trigger anxiety.

Regarding the type of IBD, our results are in contrast to those described by Tarter et al, who reported that patients with UC did not demonstrate an increased prevalence of psychiatric disorder before or after disease onset, in contrary to patients with CD [20]. We found that patients with UC had significantly higher anxiety levels; however this factor didn't remains significant at multivariate analysis and was probably dependant of other factors. In our study, in discordance with others studies, the active disease was not found as risk factors for anxiety and depression [11]. However, as previously reported in the literature, the anxiety and/or depression were more frequent in active disease, during flares and when patients had more severe disease [14]. Addoloroto et al, observed that more than 80% of IBD patients with active disease suffered from state anxiety and approximately 60% had concomitant depression [16]. Iglesias et al, in a Spanish study found that maintenance treatment with infliximab was associated with a risk of anxiety. These results could be explained by two reasons: the subgroup of patients treated with infliximab is the one who suffer from more serious CD and these patients had to regularly (every 8 weeks) go to hospital, which was a situation that can generate anxiety symptoms [21].

However, in our study, the type of treatment was not associated with a higher prevalence of psychologic disorders.

The strengths of this study are the type of the study: cross-sectional, and is the largest Tunisian series using a validated questionnaire to assess anxiety and depression (HAD scale). Nevertheless, some limitations have to be considered: we analyzed risks factors for Anxiety and Depression without separation of each disorder because of the sample size; we didn't have a control group to compare the prevalence of psychological disorders, however the latter was not the principal aim of the study.

CONCLUSIONS

IBD have a strong impact on quality of life. In our cohort, anxiety was frequent in IBD, about 40%. The female sex and the high school graduation were independant risk factors for anxiety and depression. Consequently, patients with these risks factors should benefit from psychological support.

Références

1. Laktos PL. Recent trends in the epidemiology of inflammatory bowel disease/Up or down? World J Gastroenterol 2006;12:6102-8.
2. Stone MA, Mayberry JF, Baker R. Prevalence and management of inflammatory bowel disease: a cross-sectional study from central England. Eur J Gastroenterol Hepatol 2003;15:1275-80.
3. Graff LA, Walker JR, Bernstein CN. It's not just about the gut: managing depression and anxiety in inflammatory bowel disease. Practical Gastroenterology 2010;34:11-25.
4. Zigmond AS, Snaith RP. The hospital anxiety and depression scale. Acta Psychiatr Scandin 1983;67: 361–70.
5. Bjelland I, Dahl AA, Haug TT, Neckelmann D. The validity of the hospital anxiety and depression scale: an updated literature review. J Psychosom Res 2002;52:69–77.
6. Crane C, Martin M. Social learning, affective state and passive coping in irritable bowel syndrome and inflammatory bowel disease. Gen Hosp Psychiatry 2004;26:50–8.
7. Guthrie E, Jackson J, Shaffer J, Thompson D, Tomenson B, Creed F. Psychological disorder and severity of inflammatory bowel disease predict health-related quality of life in ulcerative colitis and Crohn's disease. Am J Gastroenterol 2002;97:1994–9.
8. Helzer JE, Chammas S, Norland CC. A study of the association between Crohn's disease and psychiatric illness. Gastroenterology 1984;86:324–30.
9. Froch B, Zwolinska-Wcis o M, Betkowska-Korpa a B, Mach T. The dynamics of emotional reactions in patients with inflammatory bowel disease. Przeglad Gastroenterologiczny 2009;4:141–6.
10. Hardt J, Conrad S, Muche-Borowski C, Raspe H. Epidemiology of depression and distress in patients with inflammatory bowel disease and validation of an indicator scale of perceived stress for psychological impairments. Eur Psychiatry 2011;26:2217–25.
11. Karoui S, Fakhfakh R, Daly S, Ben Hriz F, Boubaker J, Filali A. Evaluation of psychological disorders in Tunisian patients with inflammatory bowel disease. A comparative case-control study. Tunis Med 2006;84:768-71.
12. Ben Thabet J, Charfi N, Mnif L, et al. Emotional disorders and inflammatory bowel disease. Tunis Med 2012;90:557-63.
13. Mittermaier C, Dejaco C, Waldhoer T, et al. Impact of depressive mood on relapse in patients with inflammatory bowel disease: a prospective 18-month follow-up study. Psychosom Med 2004;66:79–84.
14. Nahon S, Lahmek P, Durance C, et al. Risk Factors of Anxiety and Depression in Inflammatory Bowel Disease. Inflamm Bowel Dis 2012;18: 2086–91.
15. Mikocka-Walus AA, Turnbull DA, Andrews JM, et al. Psychological problems in gastroenterology outpatients: a South Australian experience. Psychological co-morbidity in IBD, IBS and hepatitis C. Clinic Pract Epidemiol Ment Health 2008;4- 15.
16. Addolorato G, Capristo E, Stefanini GF, Gasbarrini G. Inflammatory bowel disease: a study of the association between anxiety and depression, physical morbidity, and nutritional status. Scand J Gastroenterol 1997;32:1013–21.
17. Kurina LM, Goldacre MJ, Yeates D, Gill LE. Depression and anxiety in people with inflammatory bowel disease. J Epidemiol Community Health 2001;55:716–20.
18. Arfaoui D, Elloumi H, Debbebi W, Bel Hadj Ali N, Ajmi S. Psychological disorder associated to inflammatory bowel disease. Tunis Med 2007;85:189-91.
19. Selinger CP, Lal S, Eaden J,et al. Better disease specific patient knowledge is associated with greater anxiety in inflammatory bowel disease. J Crohn Colitis 2013;7:214-8.
20. Tarter RE, Switala J, Carra J, Edwards KL, and Van Thiel DL. Inflammatory bowel disease: psychiatric status of patients before and after disease onset. Int J Psychiatry Med 1987;17:173–81.
21. Iglesias M, Barreiro de Acosta M, Vazquee I. Psychological impact of Crohn's disease on patients in remission: anxiety and depression risks. Rev Esp Enferm Dig 2009;101:249-57.