ORIGINAL ARTICLE

Complementary and alternative medicine use by patients with inflammatory bowel disease

Results from a postal survey

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SUMMARY

Aims — Thirty to 50% of north American patients with inflammatory bowel disease (IBD) have been reported to use complementary and alternative medicine (CAM). There is no data in France. The aim of this study was to evaluate the frequency of CAM use and the reasons in a French population of patients with IBD.

Patients and methods — An anonymous postal survey was done with a questionnaire mailed to all the patients with IBD, 16 to 79 year-old, followed-up in a public and a private medical centre of Reims, between January 2001 and December 2003.

Results — The final sample included 447 patients; 325 (72.7%) filled up the questionnaire: 219 (67.4%) had Crohn's disease, 94 (28.8%) ulcerative colitis and 12 (3.7%) indeterminate colitis. Sixty-nine patients (21.2%) reported CAM use for IBD. The mean number of CAM used simultaneously was 2.9. The most frequently used CAM treatment was homeopathy (40.6%), followed by magnetism (34.8%) and acupuncture (33.3%). The majority of patients (74.8%) never talked about CAM use with their IBD physician. Multivariate analysis showed that the factors significantly associated with CAM use were female gender (odds ratio (OR) = 3.5, CI95% : 1.8-6.9), the low level of confidence in their doctor (OR = 4.8, CI95%:1.1-19.8) and the research of informations about their disease (OR = 4.6, CI 95% :2.0-10.7).

Conclusion — Twenty-one percent of patients with IBD are using CAM, most of the time without talking about it with their physician. The quality of the relationship between the patient and his physician and female sex, more than the perceived severity of the disease, were the main determinants of that use.

RÉSUMÉ

Recours aux traitements alternatifs et complémentaires dans les maladies inflammatoires chroniques de l'intestin : résultats d'une enquête postale

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Objectifs — Trente à 50 % des malades nord-américains atteints d'une maladie inflammatoire chronique de l'intestin (MICI) ont recours à des traitements alternatifs et complémentaires (TAC). Aucune donnée sur ce sujet n'est disponible en France. Le but de l'étude était d'évaluer la fréquence de ce recours ainsi que ses raisons chez des malades de la région de Reims.

Malades et méthodes — Il s'agissait d'une enquête postale anonyme réalisée à l'aide d'un auto-questionnaire adressé à tous les malades atteints d'une MICI, âgés de 16 à 79 ans et vus en hospitalisation ou en consultation entre janvier 2001 et décembre 2003 au CHU et dans une clinique privée de Reims.

Résultats — Le questionnaire a été adressé à 447 malades ; 325 (72,7 %) y ont répondu : 219 (67,4 %) avaient une maladie de Crohn, 94 (28,8 %) une recto-colite hémorragique et 12 (3,7 %) une colite indéterminée. Un recours à des TAC pour le traitement de la MICI a été rapporté par 69 malades (21,2 %). Le nombre moyen de TAC utilisés simultanément était de 2,9. L'homéopathie était le traitement le plus fréquent (40,6 %), suivi du magnétisme (34,8 %) et de l'acupuncture (33,3 %). La majorité des malades (74,8 %) n'ont pas discuté avec leur médecin des TAC. En analyse multivariée, les facteurs significativement associés au recours aux TAC étaient le sexe féminin : odds-ratio (OR) = 3,5 [IC95 % : 1,8-6,9], le faible niveau de confiance envers le médecin : OR = 4,8 [1,1-19,8] et le fait de se renseigner sur sa maladie : OR = 4,6 [2,0-10,7].

Conclusion — Environ un malade atteint de MICI sur cinq a recours à des TAC, le plus souvent à l'insu du médecin. Les carences de la relation médecin-malade et le sexe féminin, plus que la gravité ressentie de la maladie, sont les éléments déterminants de ce recours.

Introduction

Use of complementary alternative medicine (CAM) is becoming increasingly popular among patients with chronic disease [1-5]. Although the term of CAM covers a broad spectrum of practices, two categories can be described: complementary treatments (massage, relaxation, aromatherapy) intended to help improve the patient's quality-of-life which are generally used at the time as conventional treatments, and alternative treatments (diet, traditional medicine, herbs) which refer to practices usually used to replace conventional treatments [6]. There is also some controversy as to whether certain practices should be included in CAM. The most consensual approach is to consider all medical practices which are not in direct compliance with recommendations from learned societies as CAM [7].

Chronic inflammatory bowel diseases (IBD), basically Crohn's disease and ulcerative colitis, have an important impact on the patient's social, occupational and affective life. Several studies conducted in the last five years in large North American cohorts have demonstrated that more than 40% of patients with IBD use CAM [3, 7-10]. There are few data available concerning use of this type of treatment in the French population [11] and no

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study has been specifically conducted in patients with IBD. If patients resort to CAM because of their dissatisfaction with the patient-physician relationship established during medical consultations, knowledge of CAM use could be helpful to improve patient management.

The purpose of this study was to evaluate the use of CAM among IBD patients in the Reims area (Marne) in France and to search for the reasons these patients resort to such methods. In order to avoid recruitment biases, patients were selected among those attending consultations in a public facility (Reims University Hospital) and a private facility (Courlancy Clinic, Reims).

Patients and methods

Study design

This was a descriptive epidemiological study based on an anonymous postal survey using a thirty-seven item multiple-choice questionnaire, the French version of the University of Calgary (Canada) questionnaire elaborated by Hilsden et al. [3]. This French version has been validated with a sample of 31 patients [3]. Minor changes were made in some items to adapt the questionnaire to the linguistic and sociological setting in France. The list of proposed CAM was modified to reflect the different practices available in France. The questionnaire was sent to patients with a cover letter explaining the purpose of the study and a pre-paid envelope for returning the questionnaire.

The questionnaires were totally anonymous. A numbering system was used to record participating patients. If the patients did not respond to the first questionnaire, a second was mailed eight weeks later.

Study sample

Inclusion and non-inclusion criteria

Patients with IBD aged 16-79 years attending gastroenterology outpatient consultations at the Reims University Hospital or the Courlancy Clinic in Reims at least once between January 2001 and December 2003 were retained for the study. Patients residing in institutions or nursing homes and patients with a doubtful diagnosis of IBD were not retained for the study.

Sampling method

Patients attending the University Hospital outpatient clinics were selected with the standard patient classification system used in France (PMSI, Programme de Médicalisation du Système d'Information) and the hospital wards coding systems. A computer search selected patients who were hospitalized or consulted outpatient clinics for IBD during the study period using the International Disease Classification (IDC 10th edition) codes for simple or complicated Crohn's disease, simple or complicated ulcerative colitis, rectitis, and colitis of undetermined cause. Patients receiving care at the Courlancy Clinic were selected from the list of patients maintained by the two pathology laboratories working with the clinic's gastroenterologists. All patients with Crohn's disease, ulcerative colitis or inflammatory bowel disease of undetermined cause who had had one or more intestinal biopsies since January 1st 1999 were noted on the lists then patients seen between January 2001 and December 2003 for consultation or hospitalization were selected for the study.

The medical files of the patients were reviewed to check that the diagnosis of inflammatory bowel disease was correct and to note any deaths.

Data collected

The questionnaire was divided in five parts:

1) The first part included items used to define the type of IBD, describe disease activity level as perceived by the patients, disease duration, history of hospitalization, surgery or proctology surgery, conventional treatments, physical exercise or prayers.

2) The second part was reserved for patients who were using or had used CAM. A list of fifty-eight types of CAM was divided into nine categories: herbal medicine, diet, nutritional supplementation, physical therapy, alternative medicine, other therapies. For each item, the patients were asked to indicate whether they had used the CAM in the past for their IBD, were now using CAM for their IBD, or were now using CAM for other reasons. Then, in order to identify the reasons why patients had decided to use CAM, ten propositions were scored on a 5-point Likert scale from unimportant (score = 1) to very important (score = 5). To evaluate the perceived effects of CAM, responses to ten propositions were also scored from 1 (worsened) to 5 (greatly improved). The last part of the questionnaire had four multiple-choice questions concerning the number of visits to CAM practitioners and cost of the visits.

3) The third part of the questionnaire was completed only by patients who had never used CAM. This part included a series of propositions to determine why the patient made this choice, with the responses again scored with a 5-point Likert scale.

4) The fourth part was composed of nine multiple-choice questions designed to evaluate the relationship between the patient and the primary care physician (conventional medicine) and the ways patients learned about their disease other than the medical consultation.

5) The fifth part of the questionnaire included seven multiple choice questions on the patient's demographic characteristics with a blank page where the patients were invited to make any comments they wanted.

Statistical analysis

Quantitative variables are reported as mean and standard deviation, qualitative variables as number of observations (N) and percentage (%). First, participants were compared with non-participants for the following variables: age, gender, type of IBD, recruiting center and residence (administrative district). Univariate and multivariate analyses were then performed to identify factors associated with use of CAM. The Mann-Whitney non-parametric test was applied for quantitative variables and the chi-square test or Fisher's exact test as appropriate for percentages. Variables with $P < 0.20$ at univariate analysis were retained for the multivariate logistic regression analysis. $P < 0.05$ was considered significant. SAS for Windows version 8.2® was used for the statistical analysis.

Results

Participants

The self-administered questionnaire was mailed to 447 patients. Among them, 283 (63.3%) responded to the first mailing and 42 (9.4%) to the second. Non-participants were: patients who did not reside at the indicated address (questionnaires returned unanswered) (N = 34, 7.6%), deceased patients (N = 7, 1.6%), patients who declined to participate (N = 19, 4.3%), and patients who did not return the questionnaire (N = 62, 13.9%) (figure 1). The statistical analysis was thus performed on 325 responding patients (first or second mailing), giving a response rate of 72.7%.

Comparison between participants and non-participants

Participating patients were significantly younger than non-participating patients (table I). The participation rate was higher among patients followed at the University Hospital than at the private clinic. The geographic distribution of patient residence was different between participants and non-participants, more non-participants residing in the Marne administrative district. There was no significant difference regarding gender or type of IBD.

General characteristics

Mean age of the 325 participating patients was 40.5 years (range 16-79) (table II). There were 179 men (55.1%) giving a

ABBREVIATIONS:

CAM : Complementary and alternative medicine
CI : Confidence interval
IBD : Inflammatory bowel disease
OR : Odds ratio

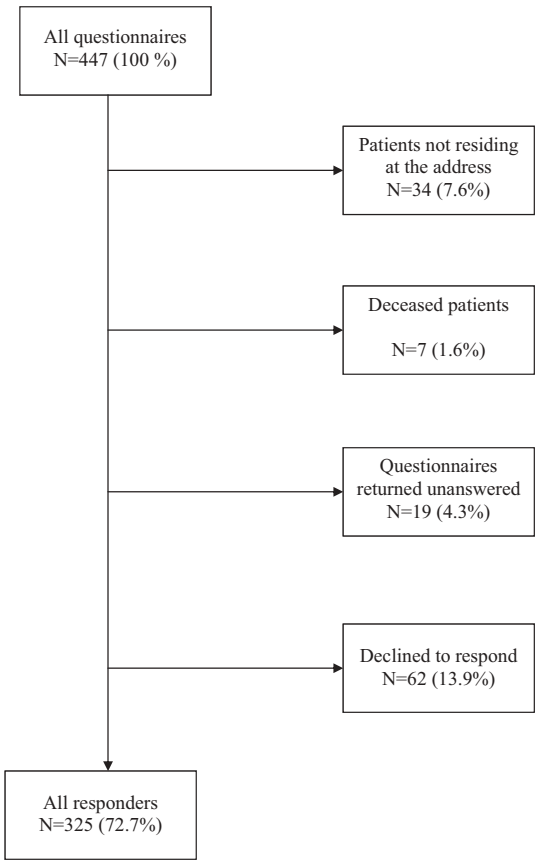

Fig. 1 – Questionnaire answers.
Réponses au questionnaire.

H:F sex ratio of 0.82. Two hundred nineteen patients had Crohn's disease (67.4%), 94 had ulcerative colitis (28.8%), and 12 had colitis of undetermined cause (3.7%). Mean aged was 37.2 ± 14.2 years for patients with Crohn's disease and 40.9 ± 13.7 for patients with ulcerated colitis. Conventional treatments used by the patient are detailed in table III.

Center effect

There was a center effect, with a difference being observed between patients recruited by the University hospital and those recruited by the private clinic, for age, residence, type of IBD, history of hospitalization and surgery for IBD, and disease activity level (table II). Self-assessed disease activity was significantly different between the centers: among patients attending the University Hospital: 45.6% considered their IBD activity moderate to severe and 12.8% considered it quiescent *versus* 35.2% and 25% respectively among the private clinic patients. The level of patient confidence and satisfaction was not significantly different between the two centers.

Use of complementary alternative medicine (CAM)

Sixty-nine patients (21.2%) used CAM for their IBD. Among them, 34 patients had used CAM in the past for their IBD and 35 were currently using CAM. Only 28 patients (8.6%) indicated they used CAM for other reasons (figure 2).

In decreasing order, CAMs most used by patients were: homeopathy, magnetism, acupuncture, vitamin therapy (table IV).

Among the patients who used CAM, 25 (36.2%) used only one type of CAM, 12 (17.4%) two types, and 36 (47.4%) more than two types. The mean number of CAMs used simultaneously was 2.9.

Fifty-five patients (16.9%) reported they prayed sometimes or often to treat their IBD. These patients used CAM significantly more often than those who did not pray, respectively 27.5% and 14.1% (P = 0.01).

Factors associated with use of CAM

Factors significantly associated with use of CAM after univariate analysis were: female gender, university hospital recruitment, lower level of confidence in the physician and satisfaction with the consultations (table V). There was also a difference concerning the social and occupational categories (P = 0.04): none of the farmers used CAM, while 37.5% of the patients with trades and crafts occupations, 28.6% of executives, 40% artists or intellectual professions, and 30% of the civil servants used CAM for their IBD.

The following variables were not significantly associated with use of CAM: age, urban *versus* rural residence, history of hospitalization or surgery for IBD, type of IBD, disease activity.

Among the conventional treatments used, univariate analysis showed that three were significantly associated with use of CAM: oral steroids (24.5% *vs* 11.3%, P = 0.02), local steroids (34.8% *vs* 15.9%, P < 0.01), loperamide (31.3% *vs* 16.8%, P < 0.01).

Reasons for using CAM and perceived effect

The four most frequently cited reasons for using CAM were: desire to better control the disease (N = 44 patients, 64%), having heard or read that such treatments could be helpful (N = 30, 44%), absence of results with conventional treatment (N = 27, 39%), secondary effects of conventional treatment (N = 26, 38%).

The positive effects of CAM the most frequently cited by the 69 patients who used such treatments were: beneficial effect against stress (N = 48, 63%), improved disease symptoms (N = 44, 58%), improved energy level (N = 44, 58%), feeling of better control over the disease (N = 39, 57%).

In addition, patients stated that use of CAM enabled lower doses of conventional treatments (N = 28, 36%), interruption of conventional treatment (N = 15, 19.7%), avoiding surgery (N = 17, 24.6%).

Reasons patients decided not to use CAM

The part of the questionnaire devoted to reasons for not using CAM concerned 256 patients. The reasons the most frequently cited were: unawareness of such treatments (N = 113 patients, 44.1%), good results with conventional treatments (N = 105, 41%), not thinking about it (N = 91, 35.6%), absence of efficacy of CAM (N = 67, 26.2%). In addition, 81 patients (31.6%) did not use CAM because they felt their physician would not approve of such an attitude.

Visits with practitioners and cost

Patients consulted practitioners proposing three types of CAM: homeopathy, acupuncture, physical therapy. During the 12 months preceding the questionnaire, patients had attended a consultation for one of these types of CAM: more than five times (N = 17 patients, 25% of patients who used CAM), three to five times (N = 18, 26.3%), once or twice (N = 4 (6.3%), none (N = 29, 42.5%).

During the preceding 12 months, expenditures for CAM were: 0 euros for 30 patients (43.9%), less than 100 euros for 8 (11%), 100-250 euros for 20 (29.3%) and more than 250 euros for 11 (15.9%).

Table I. – Demographic characteristics of participants and non-participants patients.
Données démographiques des malades participant et non participant à l'enquête.

Variables	Participants N = 325	Non-participants N = 122	P
Age (md = 17)			
Mean age (SD), years	40.5 (14.3)	44.5 (16.1)	0.041[a]
Female gender (md = 3)			
N (%)	179 (55.1)	57 (47.9)	NS[b]
Type of IBD (md = 3), N (%)			NS
Crohn's disease	219 (67.4)	70 (58.8)	
Ulcerative colitis	94 (28.9)	43 (36.1)	
Undetermined colitis	12 (3.7)	6 (5)	
Center, N (%)			0.004[b]
University hospital	198 (60.9)	56 (45.9)	
Courlancy clinic	127 (39.1)	66 (54.1)	
District of residence (md = 8), N (%)			0.003[c]
Marne	191 (58.8)	91 (74.6)	
Ardennes	61 (18.8)	10 (8.2)	
Aube	8 (2.5)	2 (1.6)	
Haute-Marne	3 (0.9)	0 (0)	
Aisne	50 (15.4)	10 (8.2)	
Other	12 (3.7)	9 (7.4)	

md = missing data, NS = non significant,
[a]: Mann – Whitney test, [b]: c2 test [c]: Fisher exact test.

Relations with conventional practitioners and the health care system

For their IBD, patients preferentially consulted a gastroenterologist (68.3%), a general practitioner (25.5%) or a surgeon (3.4%); 74.8% stated they had never discussed CAM with their doctor.

Participating patients indicated they had searched for complementary information about their disease in books (N = 80, 24%), journals or magazines (N = 114, 35%), on the Internet (N = 130, 40%). These patients also used CAM more often (37.5%, 35.1%, and 26.9%, respectively, P < 0.01). Only 30 patients (9.2%) were members of the François AUPETIT association (French IBD patient association); these patients used CAM significantly more often (43.3%, P < 0.01). Among patients who had searched for complementary information (books, journals, Internet, François AUPETIT association) 66.7% used CAM *versus* 6.0% of those who had not searched for complementary information (P < 0.0001).

Regarding the relation between the patient and the conventional practitioner, 240 patients (73.8%) preferred sharing decision making about their treatment with their physician. The 20 patients who preferred to decide themselves without considering the opinion of the physician used CAM significantly more often (50%) than the others (P < 0.01).

The most frequent remarks made by patients on the blank page were: concern about disease-related stress, difficulty in tolerating side effects of corticosteroid therapy, insufficient empathy of the physician.

Multivariate analysis of parameters associated with use of CAM

At multivariate analysis, factors significantly associated with use of CAM were: female gender (odds ratio (OR) = 3.5 [CI95% 1.8-6.9] (P = 0.0002), low level of confidence in the physician (*versus* average or high level of confidence): OR = 4.75 [1.1-19.8] (P = 0.03) and having looked for complementary information about their disease (books, journals, Internet, …) OR = 4.6 [2.0-10.7] (P = 0.0004).

Discussion

In our study, 21.2% of the participating patients with IBD had used CAM for their disease. However, 74.8% of them had not discussed CAM with their physician, often because they were concerned about his/her reaction or his/her lack of knowledge about the subject, as has been reported in other studies [3, 12, 13].

The main drawback in our study is the lack of a control population. Thus we cannot evaluate CAM use by patients with IBD in comparison with the general population, both in terms of absolute consumption and type of consumption. None of the published studies, whether devoted to IBD or another disease, have included a control group. One study reported by a polling institute (IPSOS) in 2003 showed that 47% of the French population had attended a homeopathy consultation at least once, a figure which contrasts with the 8.6% of our patients who stated they

Table II. – *Principal characteristics of the study sample.*
Caractéristiques principales des malades participant à l'enquête.

Variables	Total N = 325	University hospital N = 198	Courlancy clinic N = 127	P
Age (md = 3)				
Mean age (SD), years	40.5 (14.3)	39.3 (14.7)	42.4 (13.7)	0.025[a]
Female gender (md = 3)				
N (%)	179 (55.1)	116 (58.6)	63 (49.6)	NS[b]
Educational level (md = 11), N (%)				NS[b]
Grade school	51 (16.2)	34 (17.9)	17 (13.7)	
High school	67 (21.3)	46 (24.2)	21 (16.9)	
High school diploma	59 (18.8)	30 (15.8)	29 (23.4)	
Higher education	80 (25.5)	48 (25.3)	32 (25.8)	
Apprenticeship	57 (18.2)	32 (16.8)	25 (20.2)	
Occupation (md = 12), N (%)				NS[b]
Farmer	7 (2.2)	5 (2.7)	2 (1.6)	
Crafts and trades	8 (2.6)	4 (2.1)	4 (3.2)	
Executive, self-employed	28 (9)	14 (7.4)	14 (11.3)	
Artist, intellectual occupation	5 (1.6)	2 (1.1)	3 (2.4)	
Teacher, civil servant	40 (12.8)	21 (11.1)	19 (15.3)	
Employee	90 (28.8)	60 (31.8)	30 (24.2)	
Laborer	36 (11.5)	17 (9)	19 (15.3)	
Retired	37 (11.8)	24 (12.7)	13 (10.5)	
Other	62 (19.8)	42 (22.2)	20 (16.1)	
District of residence, N (%)				< 0.01[c]
Marne	191 (58.8)	98 (49.5)	93 (73.2)	
Ardennes	61 (18.8)	47 (23.7)	14 (11.0)	
Aube	8 (2.5)	8 (4.0)	0 (0)	
Haute-Marne	3 (0.9)	2 (1.0)	1 (0.8)	
Aisne	50 (15.4)	37 (18.7)	13 (10.2)	
Other district	12 (3.7)	6 (3.0)	6 (4.7)	
Type of IBD, N (%)				< 0.01[b]
Crohn's disease	219 (67.4)	150 (75.8)	69 (54.3)	
Ulcerative colitis	94 (28.8)	44 (22.2)	50 (39.4)	
Undetermined colitis	12 (3.7)	4 (2.0)	8 (6.3)	
History of hospitalization for IBD, N (%)				
	243 (75.0)	166(83.8)	77 (61.1)	< 0.0001[b]
History of surgery for IBD, N (%)				
	126 (38.8)	90 (45.5)	36 (28.4)	0.002[b]

md = missing data. NS = non significant. [a] Mann – Whitney test. [b] c2 test. [c] Fisher exact test.

Table III. – Conventional treatment use.
Recours aux traitements conventionnels.

Variables	Crohn's disease N = 219 N (%)	Ulcerative colitis N = 94 N (%)	Colitis of undetermined cause N = 12 N (%)	Total N = 325 N (%)
Oral treatments				
Corticosteroids	176 (80.4)	62 (66)	7 (58.3)	245 (75.4)
5-aminosalicylates	182 (83.1)	85 (90.4)	11 (91.7)	278 (85.5)
Loperamide	81 (36.7)	15 (16)	3 (25)	99 (30.5)
Azathioprine	118 (53.9)	27 (28.7)	3 (25)	148 (45.5)
Methotrexate	21 (9.6)	1 (1.1)	0 (0)	22 (6.8)
Antibiotics	43 (19.6)	5 (5.3)	3 (25)	51 (15.7)
Local treatments				
Corticosteroids	40 (18.3)	46 (48.9)	6 (50)	92 (28.3)
5-aminosalicylates	44 (20.1)	70 (74.5)	8 (66.7)	122 (37.5)
Intravenous treatments				
Corticosteroids	62 (28.3)	21 (22.3)	5 (41.7)	88 (27.1)
Parenteral nutrition	58 (26.5)	16 (17)	3 (25)	77 (23.7)
Cyclosporin	1 (0.5)	3 (3.2)	0 (0)	4 (1.2)
Infliximab	25 (11.4)	1 (1.1)	0 (0)	26 (8)

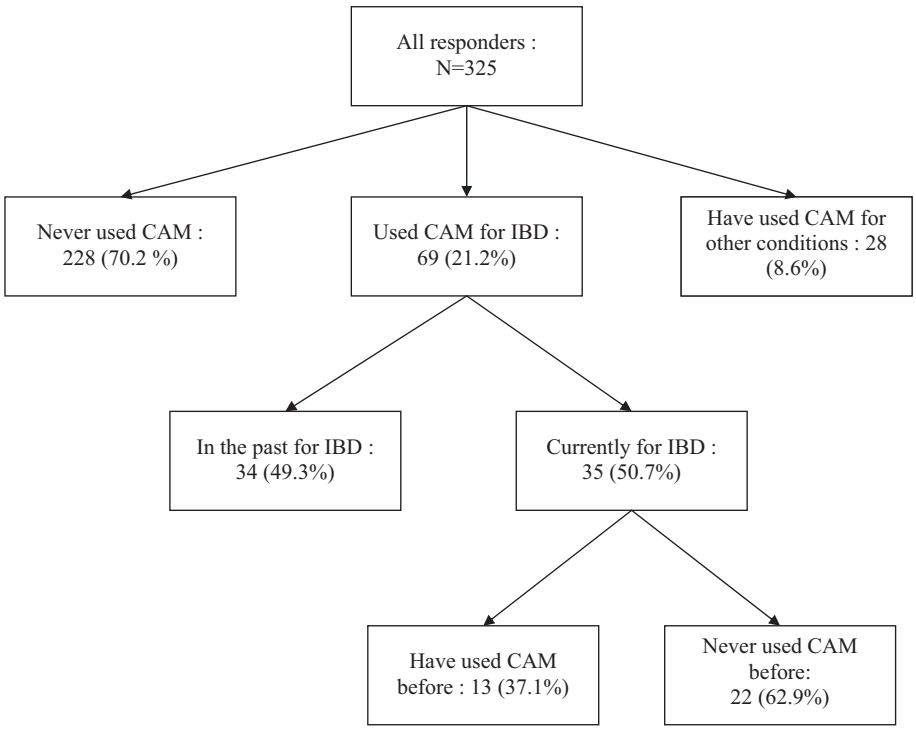

Fig. 2 – Complementary alternative medicine (CAM) use by patients with inflammatory bowel disease in the study sample.
Recours aux traitements alternatifs et complémentaires des sujets participant à l'enquête.

had used homeopathy for their IBD. This could probably be explained by the fact that homeopathy is generally used for common health problems. The only available French study on the topic has shown that among patients attending a homeopathy consultation, only 6.9% did so for gastrointestinal disorders [11]. The low level of CAM use before the diagnosis of IBD in our

Table IV. – Common complementary and alternative medicine (CAM) used by patients.

Traitements alternatifs et complémentaires les plus utilisés par les malades.

Types of CAM	N = 69 (%)
1) Homeopathy	28 (40.6)
2) Magnetism	24 (34.8)
3) Acupuncture	23 (33.3)
4) Multivitamin supplementation	17 (24.6)
5) Osteopathy	11 (15.9)
6) Psychotherapy	10 (14.5)
7) Gluten free diet	10 (14.5)
8) Relaxation	9 (13.0)
9) Massages	8 (11.6)
10) Sophrology	7 (10.1)
11) Royal jelly	7 (10.1)
12) Others	62 (89.9)

The total is greater than 100% because some patients used more than one CAM. 55 patients (16.9%) also prayed for their disease.

series (6.8%) could be considered as an "internal control" showing that current use of CAM was largely related to the presence of IBD.

We only retained patients who attended consultations or were hospitalized during the last three years. For patients seen at the private clinic, we included those who had a digestive biopsy since 1999, which probably led to the selection of a sample of patients with more severe forms of IBD. Furthermore, it is well established that there is a risk of an information bias (memorization, prevarication) when using a self-administered questionnaire [14].

The robustness of the present study is strengthened by the large sample size and the high response rate (72.7%). Selection bias, particularly concerning the type of IBD, was also reduced by including patients recruited in a public center and a private clinic.

The 21.2% rate of CAM use observed in this population is about half the rate found in groups of North-American patients [1, 3, 5, 8, 10] (table VI). The one study comparing European and American patients showed a lower rate of CAM use in Europe (Ireland and Sweden) [10], but still higher than in our population.

Most of the patients in our population who used CAM opted for homeopathy, magnetism or acupuncture (table IV). These results are in agreement with those of most studies reported in European populations [10, 15, 16] although variations related to different ethnic backgrounds are observed. It would appear that Asian populations living in western countries use acupuncture more than their Caucasian counterparts [17, 18]. This point was not assessed in our survey. In the United States and Canada, herbs and vitamins readily available in health food stores which promote their use, are the most widely used CAM [3, 8]. These observations point out the cultural differences between American and European patients regarding use of CAM.

Three variables were significantly associated with use of CAM: female gender, lower level of confidence in the physician, and searching for information about the disease. At multivariate analysis, female gender was independent from searching for complementary information. Most studies already mentioned female predominance (76.8% in our study) [1-4,7-9, 11, 13, 19, 20].

Three quarters of the patients in our study population stated they were highly or totally confident in their physician and/or were highly or totally satisfied with the consultations. The observation that patients who stated they were less confident in their physician used CAM significantly more often was not an unexpected finding.

Searching for complementary information on IBD was the third factor significantly related with use of CAM; this factor is not always reported in similar studies. This association might be related to the fact that the medias have increasingly focused on health-related subjects in recent years and that modes and trends affect use of CAM [5]. Moreover, three quarters of the patients in our study stated they wanted to share the responsibility of the therapeutic decisions with their physician. This is a more modern version of the patient-physician relationship where the patient takes a more active part in the decision making process. The fact that 43.3% of patients who were members of the François AUPETIT association used CAM and also that 66.7% of patients who searched for complementary information very often used CAM are in line with this type of attitude. Use of alternative medicines does not exclude use of conventional treatments, but rather is seen a complement, as has been demonstrated by others [3, 4, 10, 13, 15, 22-25]. At multivariate analysis, none of the conventional treatments used was associated with use of CAM while in earlier work, the secondary effects of treatment, particularly corticosteroid treatment, was noted as a reason for using alternative treatments [6, 13, 15, 22-25]. This motivation, as well as the inefficacy of conventional treatments, was nevertheless mentioned by the patients in our study. The beneficial or expected effect of CAM on anxiety or stress, energy level, and feeling of controlling the disease was also cited in earlier studies [3, 6, 13, 15, 22-25].

The absence of any difference in CAM use by disease activity or severity (immunosuppressor treatment, intravenous treatment, history of hospitalization or surgery) was an unexpected result, different from earlier reports [3, 4, 8]. It must be noted that all of these studies did not use multivariate analysis to rule out possible confounding factors. Furthermore, the medical concept of disease activity or severity may not be the same as the patient's perception. In the present study, disease severity was perhaps better evaluated by the patients dissatisfaction, one of the factors shown to be significant at multivariate analysis.

Thus, CAM use was generally more related to an insufficiency of the patient-physician relationship as perceived by the patient rather than to the failure of medical or instrumental treatment. This suggests that specialists should be more attentive to their patient's perception of the disease and associated phenomena and also should try to learn more about CAM in order to be able to discuss the subject with their patients.

CAM practices have the reputation of being "healthful" or "natural" [7, 15] but are not devoid of secondary effects: the benign undesirable effects of herbal medicine [26] or acupuncture [27] are well known, but there is also a risk of fulminant hepatitis due to toxic plant extracts [28]. It is also known that certain treatments can modify the pharmacodynamics of conventional treatments; for example pineapple juice reduces the bioavailability of cyclosporin [18, 29]. It is thus the responsibility of the physician to inform patients that these treatments are not totally safe.

Few studies have evaluated the efficacy of CAM in IBD [30-33] and their results are insufficient to draw any conclusion. Methodological deficiencies as well as the lack of randomization or double-blind design and the small number of patients under study do not allow a sufficient level of proof.

Table V. – Comparative characteristics for patient users and non-users of complementary and alternative medicine (CAM).

Caractéristiques comparatives des malades ayant et n'ayant pas eu recours aux traitements alternatifs et complémentaires.

Variables	Total N = 325	Patient-users of CAM N = 69	Patient-non users of CAM N = 256	P
Age (md = 3)				
Mean age (SD), years	40.5 (14.3)	40.7 (14.6)	39.8 (16.2)	NS[a]
Female gender				
N (%)	179 (55.1)	53 (76.8)	126 (49.2)	< 0.0001[a]
Recruitment, N (%)				0.027[a]
University hospital	198 (60.9)	50 (72.5)	148 (57.8)	
Courlancy clinic	127 (39.1)	19 (27.5)	108 (42.2)	
Type of IBD, N (%)				NS[a]
Crohn's disease	219 (67.4)	44 (63.8)	175 (68.4)	
Ulcerative colitis	94 (28.8)	22 (31.9)	72 (28.1)	
Undetermined colitis	12 (3.7)	3 (4.4)	9 (3.5)	
Disease activity[b] N (%)				NS[a]
Quiescent	57 (17.8)	10 (14.5)	47 (18.7)	
Mild	130 (40.6)	26 (37.7)	104 (41.4)	
Moderate	105 (32.8)	27 (39.1)	78 (31.1)	
Severe	28 (8.8)	6 (8.7)	22 (8.8)	
History of hospitalization for IBD				
N (%)	243 (74.8)	52 (75.4)	191 (74.6)	NS[a]
History of surgery for IBD				
N (%)	126 (38.8)	23 (33.3)	103 (40.2)	NS[a]
Level of confidence in physician (md = 7), N (%)				0.0011[a]
Little or no confidence	8 (2.5)	5 (7.5)	3 (1.2)	
Intermediary confidence	58 (18.2)	18 (26.9)	40 (15.9)	
High or total confidence	252 (79.3)	44 (65.7)	208 (82.9)	
Level of satisfaction with consultations (md = 7), N (%)				0.0073[a]
Little or no satisfaction	18 (5.7)	7 (10.5)	11 (4.4)	
Intermediary satisfaction	64 (20.1)	20 (29.9)	44 (17.5)	
High or total satisfaction	236 (74.2)	40 (59.7)	196 (78.1)	

md = missing data, NS = non significant, [a] c2 test [b] patient self-assessment.

The growing popularity of CAM is not specific to intestinal diseases. Many patients with other disabling chronic diseases use CAM. Several recent publications have demonstrated the impact in the field of oncology where the complementary role to conventional treatment is particularly notable for the relief of cancer-related and treatment-related concerns [6, 12, 13, 22].

The same trends can be observed for other diseases such as asthma [34], or psoriasis [35, 36] where different techniques such as relaxation, psychotherapy, or acupuncture are used. CAM are also used by patients with rheumatoid arthritis [37, 38], irritable bowel syndrome [39, 40], or chronic liver disease [20, 41, 42].

In conclusion, one out of five patients uses CAM for IBD and only one out of four discusses it with his/her physician. Women use CAM more often. More frequent use of CAM appears to reflect an insufficient patient-physician relationship more than disease severity, at least as perceived by the patient. Beyond the question of whether or not CAM are effective for the treatment of IBD, physicians should first be concerned about why patients use CAM without discussing it with them. Patients probably want

Table VI. – Complementary alternative medicine (CAM) use by patients with inflammatory bowel disease: literature review.

Recours aux traitements alternatifs et complémentaires par les malades atteints de MICI : revue de la littérature.

Study [reference]	Year	Country	N	Type of study	Use of CAM (%)
This study	2004	France	325	Postal survey	21
Burgmann et al. [1]	2004	Canada	150	Telephone survey	29
Quattropani et al. [15]	2003	Switzerland	144	Postal survey	47
Hilsden et al. [3]	2003	Canada	3284	Postal survey	47.2
		United States (L.A.)	114		68
		Canada (Winnipeg)	61		57
Rawsthorne et al. [10]	1999	Sweden (Stockholm)	56	Consultation	32
		Ireland (Cork)	58		31
		Total	289		51
Moody et al. [17]	1998	Great Britain	382	Postal survey	47
Hilsden et al. [8]	1998	Canada	134	Postal survey	33
Moser et al. [4]	1995	Austria	105	Consultation	34
Verhoef et al. [24]	1990	Canada	395	Consultation	9

their physician to be more attentive to how they "live" their disease [3, 6, 13]. Furthermore, physicians should be able to inform their patients about the possible undesirable effects of CAM.

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REFERENCES

1. Burgmann T, Rawsthorne P, Bernstein CN. Predictors of alternative and complementary medicine use in inflammatory bowel disease: do measures of conventional health care utilization relate to use? Am J Gastroenterol 2004;99:889-93.
2. Eisenberg DM, Kessler RC, Foster C, Norlock FE, Calkins DR, Delbanco TL. Unconventional medicine in the United States. Prevalence, costs, and patterns of use. N Engl J Med 1993;328:246-52.
3. Hilsden RJ, Verhoef MJ, Best A, Pocobelli G. Complementary and alternative medicine use by Canadian patients with inflammatory bowel disease: results from a national survey. Am J Gastroenterol 2003;98: 1563-8.
4. Moser G, Tillinger W, Sachs G, Maier-Dobersberger T, Wyatt J, Vogelsang H, et al. Relationship between the use of unconventional therapies and disease-related concerns: a study of patients with inflammatory bowel disease. J Psychosom Res 1996;40:503-9.
5. Complementary medicine is booming worldwide. BMJ 1996;313: 131-3.
6. Dilhuydy JM. L'attrait pour les médecines complémentaires et alternatives en cancérologie : une réalité que les médecins ne peuvent ni ignorer, ni réfuter. Bull Cancer 2003;90:623-8.
7. Guiraud GG. Le recours aux médecines parallèles au XXème siècle. Presse Med 2003;32:1638-41.
8. Hilsden RJ, Scott CM, Verhoef MJ. Complementary medicine use by patients with inflammatory bowel disease. Am J Gastroenterol 1998; 93:697-701.
9. Eisenberg DM, Davis RB, Ettner SL, Appel S, Wilkey S, Va Rompay M, et al. Trends in alternative medicine use in the United States, 1990-1997: results of a follow-up national survey. JAMA 1998;280:1569-75.
10. Rawsthorne P, Shanahan F, Cronin NC, Anton PA, Lofberg R, Bohman L, et al. An international survey of the use and attitudes regarding alternative medicine by patients with inflammatory bowel disease. Am J Gastroenterol 1999;94:1298-303.
11. Trichard M, Lamure E, Chaufferin G. Study of the practice of homeopathic general practitioners in France. Homeopathy 2003;92:135-9.
12. Ernst E.The current position of complementary/alternative medicine in cancer. Eur J Cancer 2003;39:2273-7.
13. Risberg T, Kolstad A, Bremnes Y, Holte H, Wist EA, Mella O, et al. Knowledge of and attitudes toward complementary and alternative therapies; a national multicentre study of oncology professionals in Norway. Eur J Cancer 2004;40:529-35.
14. Czernichow P, Chaperon J, Le Coutour X. Problèmes communs aux enquêtes étiologiques. In: Masson, editor. Epidémiologie. Paris; 2001 p. 443.
15. Quattropani C, Ausfeld B, Straumann A, Heer P, Seibold F. Complementary alternative medicine in patients with inflammatory bowel disease: use and attitudes. Scand J Gastroenterol 2003;38:277-82.
16. Schneider B, Hanisch J, Weiser M. Complementary medicine prescription patterns in Germany. Ann Pharmacother 2004;38:502-7.
17. Moody GA, Eaden JA, Bhakta P, Sher K, Mayberry JF. The role of complementary medicine in European and Asian patients with inflammatory bowel disease. Public Health 1998;112:269-71.
18. Langmead L, Chitnis M, Rampton DS. Use of complementary therapies by patients with IBD may indicate psychosocial distress. Inflamm Bowel Dis 2002;8:174-9.
19. Hilsden RJ, Verhoef MJ. Complementary and alternative medicine: evaluating its effectiveness in inflammatory bowel disease. Inflamm Bowel Dis 1998;4:318-23.
20. Strader DB, Bacon BR, Lindsay KL, La Brecque DR, Morgan T, Wright EC, et al. Use of complementary and alternative medicine in patients with liver disease. Am J Gastroenterol 2002;97:2391-7.
21. Scott CM, Verhoef MJ, Hilsden RJ. Inflammatory bowel disease patients' decisions to use complementary therapies: links to existing models of care. Complement Ther Med 2003;11:22-7.
22. Navo MA, Phan J, Vaughan C, Palmer JL, Michaud L, Jones KL, et al. An assessment of the utilization of complementary and alternative medication in women with gynecologic or breast malignancies. J Clin Oncol 2004;22:671-7.

23. Astin JA.Why patients use alternative medicine: results of a national study. JAMA 1998;279:1548-53.
24. Verhoef MJ, Sutherland LR, Brkich L. Use of alternative medicine by patients attending a gastroenterology clinic. CMAJ 1990;142:121-5.
25. Verhoef MJ, Scott CM, Hilsden RJ. A multimethod research study on the use of complementary therapies among patients with inflammatory bowel disease. Altern Ther Health Med 1998;4:68-71.
26. Bertram PD.Melanosis coli: a consequence of “alternative therapy” for psoriasis. Am J Gastroenterol 1993;88:971.
27. Ernst E. Pour une médecine complémentaire fondée sur la preuve. Ann Med Interne (Paris) 1997;148:472-6.
28. Durazo FA, Lassman C, Han SH, Saab S, Lee NP, Kawano M, et al. Fulminant liver failure due to usnic acid for weight loss. Am J Gastroenterol 2004;99:950-2.
29. Neuman M. Effets métaboliques et interactions médicamenteuses provoquées par certaines substances d’origine végétale : pamplemousse, millepertuis et ail. Presse Med 2002;31:1416-22.
30. Joos S, Brinkhaus B, Maluche C, Maupai N, Kohnen R, Kraehmer N, et al. Acupuncture and moxibustion in the treatment of active Crohn’s disease: a randomized controlled study. Digestion 2004;69:131-9.
31. Langmead L, Feakins RM, Goldthorpe S, Holt H, Tsironi E, De Silva A, et al. Randomized, double-blind, placebo-controlled trial of oral aloe vera gel for active ulcerative colitis. Aliment Pharmacol Ther 2004;19:739-47.
32. Ben Arye E, Goldin E, Wengrower D, Stamper A, Kohn R, Berry E. Wheat grass juice in the treatment of active distal ulcerative colitis: a randomized double-blind placebo-controlled trial. Scand J Gastroenterol 2002;37:444-9.
33. Mitsuyama K, Saiki T, Kanauchi O, Iwanaga T, Tomiyasu N, Nishiyama T, et al. Treatment of ulcerative colitis with germinated barley foodstuff feeding: a pilot study. Aliment Pharmacol Ther 1998;12:1225-30.
34. Markham AW, Wilkinson JM. Complementary and alternative medicines (CAM) in the management of asthma: an examination of the evidence. J Asthma 2004;41:131-9.
35. Ben Arye E, Ziv M, Frenkel M, Lavi I, Rosenman D. Complementary medicine and psoriasis: linking the patient’s outlook with evidence-based medicine. Dermatology 2003;207:302-7.
36. Capella GL, Finzi AF. Complementary therapy for psoriasis. Dermatol Ther 2003;16:164-74.
37. Soeken KL.Selected CAM therapies for arthritis-related pain: the evidence from systematic reviews. Clin J Pain 2004;20:13-8.
38. Fisher P, Scott DL. A randomized controlled trial of homeopathy in rheumatoid arthritis. Rheumatology (Oxford) 2001;40:1052-5.
39. Smart HL, Mayberry JF, Atkinson M. Alternative medicine consultations and remedies in patients with the irritable bowel syndrome. Gut 1986;27:826-8.
40. Xiao WB, Liu YL. Rectal hypersensitivity reduced by acupoint TENS in patients with diarrhea-predominant irritable bowel syndrome: a pilot study. Dig Dis Sci 2004;49:312-9.
41. Jacoby D, St Louis T, Navarro V. Hepatitis C practice routines among Connecticut’s naturopathic physicians. Am J Gastroenterol 2001;96:2801-2.
42. Seeff LB, Lindsay KL, Bacon BR, Kresina TF, Hoofnagle JH. Complementary and alternative medicine in chronic liver disease. Hepatology 2001;34:595-603.