

Complementary and Alternative Medicine in Irritable Bowel Syndrome: A Survey Amongst Italian Gastroenterologists

Edith Lahner, Sara Emerenziani, Michele Cicala, Paolo Arullani, Bruno Annibale

Edith Lahner, Bruno Annibale, Department of Digestive and Liver Disease, University Sapienza, Sant'Andrea Hospital, Rome, Italy
Sara Emerenziani, Michele Cicala, Department of Gastroenterology, University Campus Bio Medico, Rome, Italy
Paolo Arullani, Italian Foundation "Aldo Torsoli" for Digestive, Liver and Pancreatic Diseases, Rome, Italy

Correspondence to: Bruno Annibale, MD, Department medicochirurgico di scienze cliniche e tecnobiomediche. University Sapienza, Ospedale Sant'Andrea, Via di Grottarossa 1035, 00189 Roma, Italy. bruno.annibale@uniroma1.it

Telephone: +039-06-33775289 Fax: +039-06-4455292

Received: December 6, 2012 Revised: January 24, 2013

Accepted: January 28, 2013

Published online: April 21, 2013

IBS and other gastrointestinal disorders. High quality studies on CAM's effectiveness are needed to produce reliable evidence about usefulness of these therapeutic tools in IBS.

© 2013 ACT. All rights reserved.

Key words: Complementary and alternative medicine; CAM; Irritable bowel syndrome

Lahner E, Emerenziani S, Cicala M, Arullani P, Annibale B. Complementary and Alternative Medicine in Irritable Bowel Syndrome: A Survey Amongst Italian Gastroenterologists. *Journal of Gastroenterology and Hepatology Research* 2013; 2(4): 526-530
Available from: URL: <http://www.ghrnet.org/index./joghr/>

ABSTRACT

AIM: Patients with irritable bowel syndrome (IBS) increasingly use complementary and alternative Medicine (CAM). So far, gastroenterologists' view towards CAM is not known. This study aimed to investigate the attitude towards use of CAM in IBS amongst Italian gastroenterologists.

METHODS: E-mail survey of randomly selected academic and non-academic Italian gastroenterologists by a 12 items-questionnaire regarding demographics, knowledge about CAM and CAM use by IBS patients.

RESULTS: 96/105 (65.6% male, age 48 years) gastroenterologists completed the questionnaire. Knowledge about CAM was rated as none, low, medium or good by 12.5%, 61.5%, 21.9% and 4.2%, no difference was found between academic and non-academic gastroenterologists. Overall, 67% had a positive attitude towards CAM, which was suggested to patients with gastrointestinal disorders in general by 30.2%. With regard to IBS in particular, the percentage of IBS patients using CAM was estimated as over 50% by 19.8% and as less than 10% by 43.7% of gastroenterologists. Homeopathy, herbal medicine and nutrition-based therapies were held as the most frequently used CAM treatments in IBS. According to 14.6% and 13.5% of gastroenterologists, CAM was felt to be often or sometimes helpful to their patients. CAM was suggested as therapy for IBS by 20.8% of gastroenterologists.

CONCLUSIONS: 26% of Italian gastroenterologists feel confident with CAM irrespective of age, gender or academic affiliation and about 30% consider CAM a therapeutic option for patients with

INTRODUCTION

Irritable bowel syndrome (IBS), characterized by recurrent abdominal pain and altered bowel habits, is a common functional bowel disorder accounting for a significant proportion of patients seen in gastroenterology offices. The prevalence of IBS in Western countries has been estimated to be between 3% and 22%^[1,2]. The impact of IBS on quality of life has been reported to be comparable to that observed for congestive heart failure^[3], and direct and indirect health service costs related to IBS are high^[4,5]. Treatment of IBS is still based on the relief of single symptoms, as abdominal pain or diarrhea, but the long-term efficacy of this approach is unsatisfactory and to date no single available treatment is reliably effective for this condition^[6-8].

Over the last few years, there is an increasing interest in complementary and alternative medicine (CAM) within both Western society and medical profession, which might reflect increasing frustration regarding the poor efficacy of many conventional treatments for a range of chronic diseases^[9,10]. The lack of efficacious therapeutic approaches, the worsen of the physician-patient relationship and perhaps the particular psychologic profile may in part account for the increased use of CAM by IBS patients^[11,12]. Efforts have been done to better understand the efficacy and the role of some CAM techniques, such as acupuncture, hypnosis, and herbal medicine in the treatment of IBS^[11,13-17]. Despite conflicting results about efficacy, between 11% and 43% of patients with gastrointestinal disease use CAM, and many consider them beneficial^[18,19]. So far, the acquaintance and views of Italian

gastroenterologists towards CAM for IBS treatment have not been investigated. This study aimed to investigate the knowledge about and the attitude towards CAM amongst Italian gastroenterologists and to investigate their views about its use in the treatment of IBS.

MATERIALS AND METHODS

To investigate the opinion of gastroenterologists on CAM, a questionnaire was designed and sent by e-mail to a sample of Italian academic and non-academic gastroenterologists ($n=105$). The gastroenterologists were selected on a random alphabetical basis from the member registers of three Italian scientific societies (Italian society of gastroenterologists, Italian society of digestive endoscopy, and Italian society of hospital gastroenterologists and digestive endoscopists) in order to include from each society 35 physicians to reach a total number of 105 physicians. There were no exclusion criteria among members of the three societies. The gastroenterologists were contacted by e-mail over a 1-week period and all were asked to complete the questionnaire evaluating their views regarding CAM and its use for the treatment of IBS. A reminder was sent to non-responders two weeks later. The participants completed the questionnaire as a Word document offline and then sent it back as an e-mail attachment.

The ad hoc designed questionnaire included 12 items regarding: (1) age; (2) gender; (3) academic or non-academic affiliation; (4) self-rated knowledge about CAM, to be rated as good, medium, low or none, taking into consideration training activities, such as having attended post-doc training courses and/or meetings or scientific events during the last 12 months, or having read specific books or scientific articles (good=at least 1 post-doc training course and 2 meetings, 3 books and/or articles; medium=at least 2 meetings, 3 books and/or articles; low=at least 1 meeting, book or article; none= no training on CAM at all); (5) opinion about usefulness of 17 CAM techniques, considered by the National Center for Complementary and Alternative Medicine^[20] (art, music or dance therapy, ayurveda, chiropractic medicine, cognitive-behavioral therapy, electromagnetic therapy, herbal medicine, homeopathy, massage, meditation, naturopathy, nutrition-based therapy, prayer, qigong, reiki, therapeutic touch, traditional chinese medicine including acupuncture, and vitamin supplementation), to be rated as high (often useful), medium (sometimes useful), low (rarely useful), and none (never useful); (6) whether CAM has or has not been suggested to patients with gastrointestinal disease; (7) number of IBS patients visited per month, (8) percentage of medical activity related to IBS; (9) percentage of IBS patients who use CAM; (10) whether CAM has or has not been suggested to IBS patients; (11) which of the 17 CAM techniques are perceived as the most frequently used by the IBS patients, (12) perceived efficacy of CAM techniques in IBS patients, to be rated as high (often helpful), medium (sometimes helpful), low (rarely helpful), none (never helpful) and no feedback.

statistics

Answers were entered on an electronic data set and a descriptive statistical analysis was performed on all available input variables. Data were expressed as number of total or percentage (%) of total or mean \pm SD. Subgroups of continuous variables were compared by *t*-Student's test as they had a normal distribution. Subgroups of categorical variables were compared by chi-square test. Two-tailed *p* values less than 0.05 were considered statistically significant. Descriptive statistics were run on a dedicated software package (MedCalc Software, Mariakerke, Belgium, version 11.4.4.0).

RESULTS

A completed questionnaire was obtained in 96/105 cases, giving a response rate of 91.4%. Of the 9 non-responders, 3 were due to incorrect e-mail address and 6 were due to incomplete data.

Table 1 summarizes the main results. Of the 96 responders, 63 (65.6%) were male, the median age was 48 years, 27 (28.1%) were working at academic, 56 (58.3%) at non-academic hospital gastroenterology units, and the remaining 13 (13.6) in private medical units or clinics. The self-rated knowledge on CAM was perceived as low by the majority (61.5%), as medium or good by 21.9% and 4.2% of gastroenterologists, respectively. Age and gender were not different in gastroenterologists with different levels of CAM knowledge. No statistical difference was found between the levels of good, medium, low or no self-rated knowledge on CAM as perceived by academic (11.1%, 14.8%, 63.0% and 11.1%) and non-academic gastroenterologists (1.5%, 24.6%, 60.9%, 13.0%).

Table 2 shows the usefulness attributed to single CAM treatments by the gastroenterologists. Among treatments considered useful by more than 70% of gastroenterologists were nutrition-based therapy, art-music-dance therapy, massage, cognitive-behavioural therapy and herbal medicine.

Treatments considered useful by less than 50% of gastroenterologists were ayurveda, reiki, electromagnetic therapy, qigong and therapeutic touch. Taking all CAM techniques together, a mean of 58% of gastroenterologists considered them useful, but only 2.7% considered them often useful, while 17.5% and 37.9% thought them sometimes or rarely useful, respectively.

CAM was proposed as a therapeutic option for patients with gastrointestinal disorders by 29 (30.2%) gastroenterologists, 12 (41.4%) of them with a good ($n=3$) or medium ($n=9$), and 17 (58.6%) of them with a low ($n=16$) or no ($n=1$) self-rated knowledge on CAM ($p=0.0455$). Thirteen (52%) of the 25 gastroenterologists with medium/good knowledge of CAM did not suggest CAM to their patients with GI diseases. The proportion of academic and non-academic gastroenterologists did not differ between those who suggested CAM for gastrointestinal diseases (22.2% vs 33.3%, $p=0.4129$).

Table 1 E-mail survey investigating the attitude towards the use of CAM in IBS amongst 96 Italian gastroenterologists.

Demographics of participating gastroenterologists	
Age, mean \pm SD, years	45.2 \pm 10.5
Gender, male/female	63 (65.6) / 33 (34.4)
Affiliation, academic/nonacademic	27 (28.1) / 69 (71.9)
Complementary and Alternative Medicine (CAM)	
Overall CAM knowledge ¹ :	
- good	4 (4.2)
- medium	21 (21.9)
- low	59 (61.5)
- none	12 (12.5)
CAM suggested to patients with gastrointestinal disease	29 (30.2)
CAM and Irritable Bowel Syndrome (IBS)	
Estimated percentage of IBS patients using CAM:	
- not more than 10%	42 (43.7)
- about 25%	35 (36.5)
- more than 50%	19 (19.8)
Perceived helpfulness of CAM techniques to IBS patients ² :	
- often helpful	14 (14.6)
- sometimes helpful	13 (13.5)
- rarely helpful	35 (36.5)
- never helpful	13 (13.5)
- no feedback	21 (21.9)
CAM suggested to patients with IBS	20 (20.8)

When not otherwise indicated, data are expressed as number (%) of participating gastroenterologists. ¹ good=at least 1 post-doc training course and 2 meetings, 3 books and/or articles, medium=at least 2 meetings, 3 books and/or articles, low=at least 1 meeting, book or article; none=no training on CAM at all, during the last 12 months.

Table 2 Usefulness attributed to single complementary and alternative treatments by 96 Italian gastroenterologists.

	Useful	Often	Sometimes	Rarely	Not useful
Nutrition-based therapy	82	9	29	44	18
Art, music or dance therapy	77	3	28	46	23
Massage	76	1	30	45	24
Cognitive-behavioural therapy	72	4	32	36	28
Herbal medicine	72	6	22	44	28
Homeopathy	69	2	16	51	31
Vitamin supplementation	68	0	19	49	32
Chiropractic medicine	67	3	33	31	33
Meditation	67	4	22	41	33
Prayer	64	4	19	41	36
Traditional chinese medicine including acupuncture	59	4	23	32	41
Naturopathy	53	2	8	43	47
Ayurveda	41	2	6	33	59
Reiki	33	1	3	29	67
Electromagnetic therapy	35	1	2	32	65
Qigong	27	0	3	24	73
Therapeutic touch	26	0	2	24	74
Mean \pm SD	58.1 \pm 18.6	2.7 \pm 2.4	17.5 \pm 11.3	37.9 \pm 8.4	41.8 \pm 18.6

Data expressed as % of total of responders.

DISCUSSION

CAM is gaining a growing popularity among the public: estimates of CAM use in Western countries range from about one third to half of the general population^[21]. In Italy, although still remaining far below the estimates reported in many European countries, the proportion of CAM users has almost doubled during the last decade^[22]. Recent data collected in 2010 by the Italian National Institute for Statistics showed that 18.5% of the general population had made use of CAM in the previous year^[23]. Recent data have shown that CAM is used by approximately one in four Italian patients with inflammatory bowel disease, and use correlated significantly with female gender, higher education, hospitalization rates, extra-intestinal complications, adverse reactions to conventional treatment and active disease^[24].

Among possible explanations for the growing use of CAM among patients with chronic diseases are dissatisfaction and frustration with pharmacological treatment, in particular with regard to the patient-physician relationship, concerns about the side effects of synthetic drugs, and personal beliefs favouring a more holistic orientation to health care^[9,10,25]. These general motivations for CAM use fit very well with IBS, a chronic condition with an important impact on quality of life^[3], in which the development of therapies directed at disease modification instead of treatment of symptoms is crucial because symptom-based approaches have been largely unsuccessful, and monotherapeutic agents seem unlikely to be effective given the multi-factorial pathogenesis of IBS^[6-8].

A growing body of data shows the possible role of some CAM techniques in the treatment of IBS, such as acupuncture, hypnosis, and herbal medicine^[11,13-17] as well as the use of nutrition-based treatments and probiotics^[26,27], but the effectiveness for many CAM regimens is far from having been demonstrated by meta-analyses or systematic reviews^[11,13,14,16,28,29]. The current survey shows that more than half of the interviewed gastroenterologists, who felt well acquainted with CAM regimens, did not propose these approaches to their patients. This attitude fits well with the overall strong endorsement of evidence-based medicine (EBM) among at least a subset of gastroenterologists, as EBM has become a critical component in the practice of gastroenterology in the USA and in Europe, guiding the day-to-day decisions regarding therapy in the clinical practice of many gastroenterologists^[30]. Although EBM-based criteria are applied with some difficulty to investigate the

efficacy of many CAM treatments, the need of an EBM approach, increasing the level of research on the preclinical and clinical efficacy of CAM regimens, has been claimed as an essential step to allow the effective integration of these regimens in modern therapeutic practices of Western physicians^[28,29,31]. The findings of this survey raise the issue about the need of well-designed, high-quality studies on the effectiveness of some CAM techniques in IBS and gastrointestinal diseases in general, which in turn, would lead to an increased professional competence of gastroenterology specialists. Anyway, when gastroenterologists state that they feel well acquainted with CAM, this does not necessarily mean that they are supportive of CAM, because they may have attended seminars and workshops but still remain skeptical about CAM as a treatment option. This may have a significant influence on disparities between recommending CAM to patients.

From this survey also emerged that more than half of the gastroenterologists who suggested CAM treatments to their patients did so without being well acquainted with these regimens. The limited knowledge about CAM among gastroenterologists is not surprising, because these techniques are not routinely taught to medical students in Italian universities, and CAM training is offered mainly by private schools or associations. Only recently, post-doc university courses on integrative medicine, herbal medicine and acupuncture have been offered in some Italian regions^[10,32]. As a consequence, training and knowledge on CAM depends on the interest and engagement of the single gastroenterologist. Concerns regarding the issue of professional competence in CAM have been raised also by others: The increasing demand for CAM by patients, the perception of CAM as a generally safe procedure as well as the increasing acceptance of a market-driven approach to health care, may lead some gastroenterologist to respond to the patients' requests for CAM without having had the appropriate training and competence to discuss its uses and limitations, as well as its possible adverse effects^[33-35]. Homeopathy, the most frequently used non conventional treatment in Italy^[22,23], was the mainly perceived CAM treatment by IBS patients in this survey. However, the term CAM comprises a very wide range of therapeutical approaches, and not all CAM treatments can be lumped together, in particular with regard to their scientific validity. Larger studies on this issue are needed to establish the efficacy and cost-effectiveness of the more promising

CAM therapies in IBS, and whether an approach of integrative medicine could optimize the long-term management of IBS patients. We are aware of some weaknesses of this study. The results regarding the gastroenterologists' perception about the percentage of CAM users among their IBS patients may be biased because of the well-known under-reporting by patients on CAM use, and thus our findings regarding CAM users among the IBS patients are likely underestimated. To our knowledge, no other studies of this kind on gastroenterologists have been published so far. Therefore, it is not possible to discuss our data compared to those observed in other countries, thus limiting the interpretation of our results. Another limitation of this study is the brief survey instrument used to collect the information. The questionnaire, not yet validated, was designed to obtain an adequate amount of useful information without being too exhaustive to diminishing respondent compliance. Limiting the complexity of the survey, however, prevents collection of all the useful information. For example, all perceptions were self-rated and no further information on CAM competence was collected. Finally, a limited sample of gastroenterologists was interviewed. Despite these limitations, this study, to our knowledge, is the first in the field of gastroenterology to assess CAM attitude among its specialists.

In conclusion, attitudes and opinions of CAM are weakly favorable among Italian gastroenterology physicians: 26% feeling confident with CAM and 30% considering CAM as therapeutic option for patients with IBS or other gastrointestinal disorders. High quality studies on CAM's effectiveness are needed to produce reliable evidence about the usefulness of some of these therapeutic tools in IBS and to better meet the health care demands and needs by IBS patients.

REFERENCES

- Mayer EA. Irritable Bowel Syndrome. *N Engl J Med* 2008; **358**: 1692-1699
- Tack J, Talley NJ, Camilleri M, et al. Functional gastroduodenal disorders. *Gastroenterology* 2006; **130**: 1466-1479
- Lea R, Whorwell PJ. Quality of life in irritable bowel syndrome. *Pharmacoeconomics* 2001; **19**: 643-653
- Talley NJ, Gabriel SE, Harmsem WS, et al. Medical costs in the community with irritable bowel syndrome. *Gastroenterology* 1995; **109**: 1736-1741
- Spiegel BM. The burden of IBS: looking at metrics. *Curr Gastroenterol Rep* 2009; **11**: 265-269
- Camilleri M, Andresen V. Current and novel therapeutic options for irritable bowel syndrome management. *Dig Liver Dis* 2009; **41**, 854-862
- Chang JY, Talley NJ. Current and emerging therapies in irritable bowel syndrome: from pathophysiology to treatment. *Trends Pharmacol Sci* 2010; **31**: 326-334
- Brun R, Kuo B. Functional dyspepsia. *Therap Adv Gastroenterol* 2010; **3**: 145-164
- Nahin RL, Pontzer CH, Chesney MA. Racing toward the integration of complementary and alternative medicine: a marathon or a sprint? *Health Aff* 2005; **24**: 991-993
- Giarelli G., Roberti di Sarsina P. Silvestrini B. Le medicine non convenzionali in Italia. Storia, problemi e prospettive d'integrazione, Franco Angeli, Milano 2007.
- Spanier JA, Howden CW, Jones MP. A systematic review of alternative therapies in the irritable bowel syndrome. *Arch Intern Med* 2003; **163**: 265-274
- Kessler RC, Davis RB, Foster DF, et al. Long-term trends in the use of complementary and alternative medical therapies in the United States. *Ann Intern Med* 2001; **135**: 262-268
- Lim B, Manheimer E, Lao I, et al. Acupuncture for treatment of irritable bowel syndrome. *Cochrane Database of Systematic Reviews* 2006, Issue 5. Art.No.: CD005111. DOI: 10.1002/14651858.CD005111.pub2
- Webb AN, Kukuruzovic R, Catto-Smith AG, et al. Hypnotherapy for treatment of irritable bowel syndrome. *Cochrane Database of Systematic Reviews* 2007, Issue 4. Art. No.: CD005110. DOI: 10.1002/14651858.CD005110.pub2.
- Langmead L, Rampton DS. Herbal treatment in gastrointestinal and liver disease—benefits and dangers. *Aliment Pharmacol Ther* 2001; **15**: 1239-1252
- Hussain Z, Quigley EMM. Systematic review: complementary and alternative medicine in the irritable bowel syndrome. *Aliment Pharmacol Ther* 2006; **23**: 465-471
- Madisch A, Holtmann G, Plein K, Hotz J. Treatment of irritable bowel syndrome with herbal preparations: results of a double-blind, randomized, placebo-controlled multi-centre trial. *Aliment Pharmacol Ther* 2004; **19**: 271-279
- Giese LA. A study of alternative health care use for gastrointestinal disorders. *Gastroenterol Nurs* 2000; **23**: 19-27
- Smart HL, Mayberry JF, Atkinson M. Alternative medicine consultations and remedies in patients with the irritable bowel syndrome. *Gut* 1986; **27**: 826-828
- www.nccam.nih.gov
- Ernst E. The role of complementary and alternative medicine. *BMJ* 2000; **321**: 1133-1135
- Menniti-Ippolito F, Gargiulo L, Bologna E, et al. Use of unconventional medicine in Italy: a nation-wide survey. *Eur J Clin Pharmacol* 2002; **58**: 61-64
- Eurispes - Rapporto Italia 2010 (scheda 55): Curarsi con le medicine non convenzionali.
- Bertomoro P, Renna S, Cottone M, et al. Regional variations in the use of complementary and alternative medicine (CAM) for inflammatory bowel disease patients in Italy: An IG-IBD study. *J Crohns Colitis* 2010; **4**: 291-300
- Coulter ID, Willis EM. The rise and rise of complementary and alternative medicine: a sociological perspective. *Med J Aust* 2004; **180**: 587-589
- Simrén M, Abrahamsson H, Bosaeus I, et al. Nutritional aspects in patients with functional gastrointestinal disorders and motor dysfunction in the gut. Working team report of the Swedish Motility Group (SMog). *Digest Liver Dis* 2007; **39**: 495-504
- Hoveyda N, Heneghan C, Mahtani KR, et al. A systematic review and meta-analysis: probiotics in the treatment of irritable bowel syndrome. *BMC Gastroenterology* 2009; **9**: 15.
- Koretz RL, Rotblatt M. Complementary and alternative medicine in gastroenterology: the good, the bad, and the ugly. *Clin Gastroenterol Hepatol* 2004; **2**: 957-967
- Angell M, Kassirer JP. Alternative medicine: the risks of untested and unregulated remedies (editorial). *N Engl J Med* 1998; **339**: 839-841
- Buscaglia J, Nagula S, Yuan J, et al. The practice of evidence-based medicine (EBM) in gastroenterology: discrepancies between EBM familiarity and EBM competency. *Ther Adv Gastroenterol* 2011; **4**: 283-294
- Zhang AL, Changli Xue C, Fong HHS. Integration of Herbal Medicine into Evidence-Based Clinical Practice: Current Status and Issues. In: Benzie IFF, Wachtel-Galor S, editors. *Herbal Medicine: Biomolecular and Clinical Aspects*. 2nd edition. Boca Raton (FL): CRC Press; 2011. Chapter 22.
- Vannacci A, Gensini GF. Medicina integrativa: l'interazione dei saperi passa da Berlino. www.medicinaintegrativa.it
- Bodeker G, Kronenberg F. A public health agenda for traditional, complementary, and alternative medicine. *Am J Public Health* 2002; **92**: 1582-1591
- Jowen DK, Lewith G, Stephens CR. Can doctors respond to patients' increasing interest in complementary and alterna-

tive medicine? *BMJ* 2001; **322**: 154-158

- 35 Myers SP, Cheras PA. The other side of the coin: safety of complementary and alternative medicine. *Med J Aust* 2004; **181**: 222-225

Peer reviewer: Oliver Grundmann, Clinical Assistant Professor, Department of Medicinal Chemistry, College of Pharmacy, University of Florida, PO Box 100485, Gainesville, FL 32610, the United States.