Appropriate management of symptomatic GORD in primary care : has expert opinion changed between 2001 and 2005 ?

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Abstract

Objective : **To determine current opinions of clinical experts on the appropriate management of symptomatic GORD in primary care, and to compare these opinions with those from a similar study conducted in 2001.**

Methods : **In 2001, a panel of 6 Belgian general practitioners and 6 gastroenterologists assessed the appropriateness of referral versus short-term anti-secretory medication for 768 different patient profiles, using the RAND/UCLA method. Applying a similar methodology, the same panel repeated these assessments in 2005. In addition, panellists were asked to indicate the preferred type of medication for all patient profiles.**

Results : **Agreement between the results of 2001 and 2005 was high. Appropriateness ratings on referral versus medication were similar in 79% of patient profiles (weighted kappa value 0.77). Higher age and use of NSAIDs remained the dominant factors in favour of referral.**

Medication preference (not measured in 2001) showed marked differences between general practitioners and gastroenterologists. Gastroenterologists showed a higher preference for PPI high dose, whereas general practitioners more frequently chose for PPI low dose. H_2-receptor antagonists were preferred in only few cases.

Conclusions : **This study showed that expert opinion on the appropriateness of referral for endoscopy in patients with symptomatic GORD has only slightly changed over the past few years. Preferences for low and high dose PPIs varied between the two groups of physicians, which is most likely to be ascribed to the different patient populations seen in either primary or specialised care.** (Acta gastroenterol. belg., **2007**, 70, **171-176**).

Key words : gastroesophageal reflux, gastrointestinal endoscopy, anti-secretory medication, expert opinion, RAND method.

Introduction

The appropriate management of symptomatic gastro-oesophageal reflux disease (GORD) in primary care is focused on two important issues. The first issue relates to the question as to whether patients with GORD-like symptoms should be referred for endoscopy immediately, or whether empirical anti-secretory treatment can be justified as an initial option (1). The second issue concerns the type and dose of medication to be prescribed in relation to the clinical characteristics of the patient (2). Although several guidelines have been published on GORD management, these are usually insufficiently specific to apply to the wide range of patients seen in daily clinical practice. In order to fill this gap, in 2001 a Belgian panel study was conducted to establish recommendations for the management of GORD at the patient-specific level. In that study, a panel of 6 general practitioners and 6 gastroenterologists used the RAND appropriateness method to assess the appropriateness of endoscopy versus short-term medication for a large number of different patient profiles (3). The panel results showed strong internal consistency and were subsequently translated into recommendations complementary to clinical guidelines (3). As shifting scientific insights necessitate the periodic update of clinical recommendations, we repeated the panel study with the same participants in 2005, using a similar design. This article reports on the comparison of the panel opinions on the appropriate management of symptomatic GORD in 2001 and 2005.

Methods

Study design and comparability of results from 2001 and 2005

The methodology and results of the 2001 panel study have been reported previously (3). In short, the Belgian expert panel rated the appropriateness of referral for endoscopy and short-term anti-secretory treatment for 768 patient profiles (cases). These cases were unique combinations of the values of a number of clinical variables considered relevant for the decision making process. Panellists used an electronic program to individually rate the appropriateness of referral versus medication using a 9-point scale (1 = referral is appropriate, 9 = medication is appropriate, 5 = uncertain). By applying particular mathematical rules, typically used in

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RAND panel studies (4), the appropriateness of referral and medication was calculated for each of the patient profiles (appropriate, inappropriate, uncertain). Using the same procedure, the panel assessed the appropriateness of various pharmacological options. The panel then convened for a one-day meeting to discuss the results. Based on the panel discussion a number of alterations and refinements to the rating structure were made, after which the panellists re-rated all indications.

For the 2005 update, an identical rating approach was used to assess the appropriateness of referral versus medication. Slight changes were made to the classification of GORD lesions (use of Los Angeles classification (5) instead of the Savary-Miller classification) and the cut-off point for age (50 years instead of 45 years, following the latest Belgian consensus document (6)), but the influence of these adaptations on the panel ratings is most likely negligible. As regards the appropriateness judgements between the various types of antisecretory medications, the rating procedure was changed considerably. Instead of head-to-head comparisons, panellists were asked to indicate the preferred treatment for each of the patient profiles. As a consequence, results for this part of the study cannot be directly compared to those of 2001.

Study population and clinical variables

The study population to be considered was similar to that of the 2001 study and was defined as 'all cases of patients presenting to a general physician with heartburn and/or regurgitation'. Patients with the following conditions were excluded from the rating process because the panel considered these to be imperative for referral to a gastroenterologist : mucosal lesions ≥ grade C (Los Angeles classification), alarm symptoms (obstructive dysphagia, odynophagia, signs of upper gastrointestinal bleeding or unexplained weight loss), and failure after previous treatment with a proton pump inhibitor (PPI). According to the use of previous medication for symptomatic GORD, patient cases were divided into 4 subgroups ('chapters'). For each of these chapters, different clinical variables were selected in relation to their relevance for treatment choice (Table 1).

Rating procedure

The conceptual framework for the 2005 rating study is depicted in Figure 1. Panellists used an electronic program to individually assess the appropriateness of referral versus medication for all 768 patient cases (Fig. 2). In addition, they had to indicate the preferred type of

Table 1. — **Clinical variables, definitions and categories used for the construction of patient cases per patient group ("Chapter")**

	Variable	Chapter*	Categories	Definitions
1.	Relapse	2, 4	a. Early (< 6 months) b. Late (≥ 6 months)	Recurrence of symptoms after discontinuation of initially successful treatment.
2.	Dyspeptic symptoms	All	a. No b. Yes	Presence of pain or discomfort in the upper abdomen, with or without nausea, vomiting, early satiety, or epigastric fullness.
3.	Extra-intestinal symptoms	All	a. No b. Yes	Presence of non-cardiac chest pain and/or chronic coughing and/or hoarseness.
4.	Duration of symptoms	1	a. < 2 months b. ≥ 2 months	Duration since onset of symptoms
5.	Impact on quality of life	All	a. Mild-moderate b. Severe	Mild-moderate : slight or tolerable interference with daily living activities. Severe : strong impact on daily living activities.
6.	Age	All	a. < 50 years b. ≥ 50 years	
7.	NSAID use	All	a. No b. Yes	Long-term (chronic) use of either non-selective COX antagonists or selective COX-2 antagonists. Discontinuation is not an option.
8.	Substantial use of alcohol and/or tobacco	All	a. No b. Yes	Daily intake of more than 4 glasses of alcohol (irrespective of the type) and/or smoking more than 10 cigarettes/cigars/pipes per day.
9.	Recent endoscopy	2, 3, 4	a. No b. Yes, but normal results	Recent : < 2 years ago. Normal : no abnormalities or grade A/B oesophagitis.

* Chapters :
1. Patients without previous treatment
2. Patients with a relapse after previously being treated with H_2RA
3. Patients with treatment failure after H_2RA
4. Patients with a relapse after treatment with a PPI.

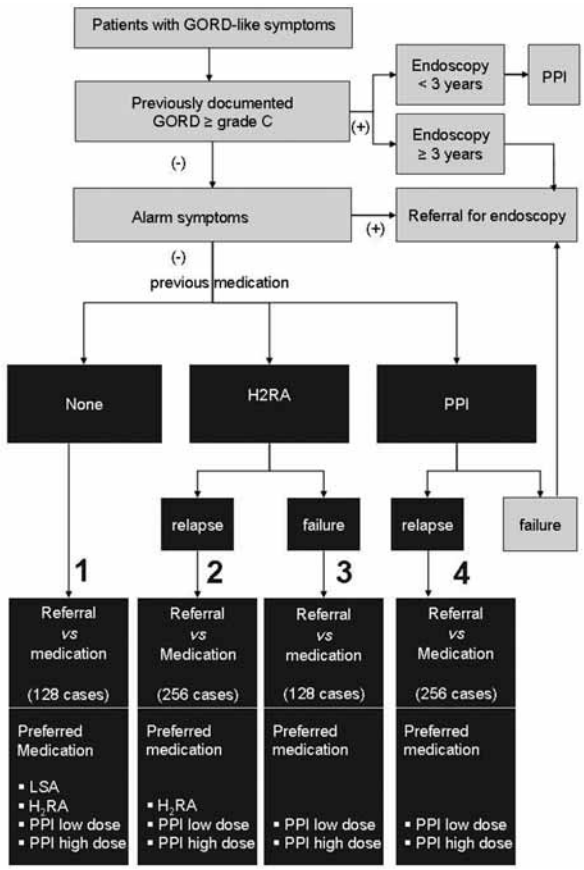

Fig. 1. — Conceptual framework of the study. Grey boxes indicate patient groups considered by the panel. LSA = life style advice.

medication. Dependent on the patient group (chapter), panellists had to choose between 2 or more of the following regimens : life style advice with or without antacids, H_2-receptor antagonists (H_2RA), PPI low dose (usually recommended empirical starting dose, equal to the usual maintenance dose) and PPI high dose (twice the usually recommended empirical starting dose, double of the usual maintenance dose). In total 1536 ratings had to be performed. The rating program was provided with a concise help function for definitions of clinical conditions and medications, and for procedures to be used. After data processing and analysis the panel convened for a half-day meeting to discuss the results.

Statistical analysis

For each of the patient profiles, panel statements about the appropriateness of referral versus medication were based on the median score and extent of agreement (Table 2). Agreement between the appropriateness ratings of 2001 and 2005 was calculated using weighted kappa statistics (7). The relationship between clinical variables and panel outcomes was studied by means of logistic regression methods.

Results

The re-rating round was conducted in October 2005, approximately 4 years after the previous study. All panellists who were involved in the 2001 study (6 general practitioners and 6 gastroenterologists) completed

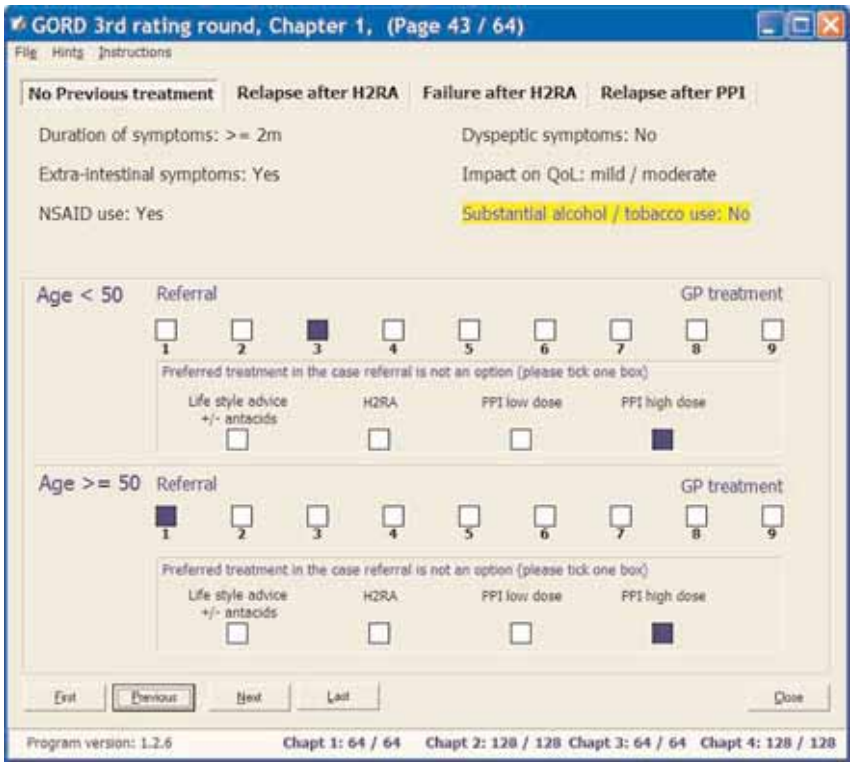

Fig. 2. — User interface of the electronic rating program

Table 2. — **Criteria for agreement (A) and appropriateness (B)**

	Category	Description
A	Agreement Disagreement Indeterminate	≤ 3 individual scores outside the section in which the median score fell ≥ 4 individual scores in each of the sections 1-3 and 7-9 All other outcomes
B	Referral is appropriate Medication is appropriate Uncertain	The median score lies in section 1-3 without disagreement. The median score lies in section 7-9 without disagreement All other outcomes

Table 3. — **Appropriateness of referral versus medication ; results of 2005 update in comparison to the figures of 2001 (sum of row totals is 100%)**

		Referral is appropriate		Uncertain		Medication is appropriate	
Chapter	# cases	2005	2001	2005	2001	2005	2001
1. No previous treatment	128	55	55	29	33	16	12
2. Relapse after H_2RA	256	38	33	24	35	38	32
3. Failure after H_2RA	128	33	35	38	18	30	47
4. Relapse after PPI	256	49	48	28	21	23	32
All chapters	768	43	42	28	27	28	31

the electronic re-rating program. Mean duration to complete the 1536 ratings was approximately 4 hours.

The extent of disagreement decreased from 18% in 2001 to 10% in 2005 (all cases together). Strongest decreases were seen for cases concerning relapse after H_2RA (23 to 9%) and after PPI (16 to 8%). The 2005 appropriateness figures for referral were strongly in line with those of 2001 (Table 3). The percentage of cases for which medication was considered appropriate was somewhat higher for chapters 1 and 2, and lower for chapter 3 and 4. A cross-tabulation of the figures for 2005 and 2001 (Fig. 3) shows that 79% of the ratings were identical (weighted kappa ($\varkappa_w$) 0.77), and that there were only one-class differences. Highest agreement was seen for chapter 4 (83%, $\varkappa_w$ 0.81), followed by chapter 2 (81%, $\varkappa_w$ 0.79), chapter 1 (74%, $\varkappa_w$ 0.65), and chapter 3 (73%, $\varkappa_w$ 0.71).

		2001			
		Referral	Uncertain	Medication	Total
2005	Referral	298	36	-	334
	Uncertain	24	133	61	218
	Medication	-	39	177	216
	Total	322	208	238	768

Fig. 3. — Agreement on appropriateness of referral versus medication between 2005 and 2001 ; absolute number of cases (all chapters).

Factors determining the appropriateness of referral for endoscopy

In logistic regression analysis (data not shown), age ≥ 50 years, symptom duration ≥ 2 months and use of NSAIDS appeared to be the strongest determinants of the opinion that referral is appropriate in patients without previous treatment. All other 'unfavourable' conditions co-determined the appropriateness of referral, albeit less pronounced. The dominant outcome for this patient group was that referral is appropriate in patients ≥ 50 years with at least 1 other unfavourable condition, and in patients < 50 years with at least 3 other unfavourable conditions. For patients with relapse or failure after previous medical therapy, referral was never considered appropriate in those with a recent endoscopy showing no or at most grade A/B abnormalities. For patients without a recent endoscopy, referral was considered appropriate in most patients ≥ 50 years and/or those using NSAIDs. With slight differences, these patterns are comparable to those found in the 2001 study (2).

Preferred treatment

For each of the patient profiles panellists were asked to indicate the preferred type of medication. Preferences were asked for all cases, irrespective of the opinion whether referral or medication was appropriate. The rationale behind this procedure was to avoid missing values, but also to get insight into the preferred type of medication for cases in which referral is not an option (for instance if the patient refuses referral). In the analyses a distinction was made between patient profiles for which referral was considered inappropriate or uncertain, and those for which the panel found that

Table 4. — **Preferred treatment (2005 ratings) by specialty and appropriateness of referral. Percentage of total ratings per chapter ; sum of column totals per chapter is 100%. GPs = general practitioner, GEs = gastroenterologists**

Chapter/type of medication	Referral is inappropriate or uncertain		Referral is appropriate		Total
	GPs	GEs	GPs	GEs	
1. Patients without previous treatment					
Life style advice +/- antacids	22	–	11	–	8
H_2RA	11	–	6	–	5
PPI low dose	39	22	34	13	26
PPI high dose	28	78	49	87	61
2. Patients with relapse after H_2RA					
H_2RA	14	10	12	4	10
PPI low dose	45	27	47	22	35
PPI high dose	41	63	41	74	55
3. Patients with failure after H_2RA					
PPI low dose	45	14	41	13	29
PPI high dose	55	86	59	87	71
4. Patients with relapse after PPI					
PPI low dose	32	25	22	15	23
PPI high dose	68	75	78	85	77

medication was appropriate. The extent of agreement on preferred medications (≥ 9 panellists displaying the same preference) varied between 24% (chapter 2) and 73% (chapter 4). The percentage of strong disagreement (≥ 4 panellists preferring a different option) ranged from 27 (chapter 4) to 56 (chapter 2). The lack of agreement was clearly due to differences in opinions by specialty (Table 4). Gastroenterologists showed a higher preference for PPI high dose, whereas general practitioners more frequently chose one of the other options. Preference for a PPI high dose tended to be higher in patients considered appropriate candidates for referral, but the differences between the specialties remained substantial. In logistic regression (using consensus of ≥ 9 panellists as a cut-off point), NSAID use, the presence of extra-intestinal symptoms and severe impact of symptoms on quality of life proved to be the dominant factors in favour of PPI high dose (data not shown). However, the diversity of opinions between panellists prevents the establishment of clear recommendations in this respect.

Discussion

Comparison of the 2005 ratings with those of 2001 showed a remarkably high extent of agreement (79%, $\varkappa_w$ 0.77) on the recommendations about referral versus medication in patients with symptomatic GORD. In addition, consistency in underlying patterns (impact of the different clinical variables on the panel outcomes)

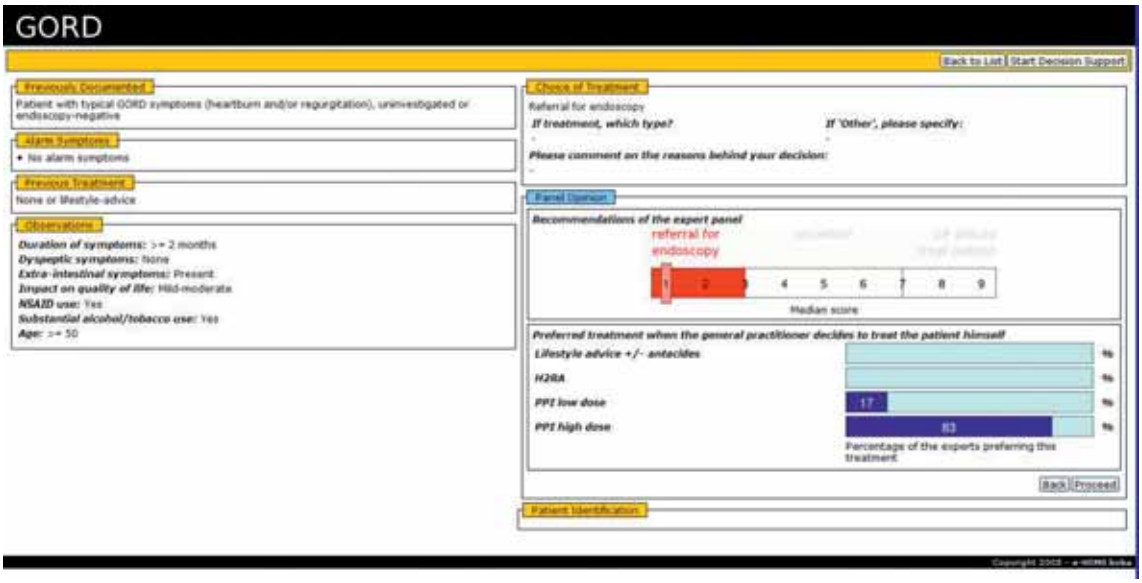

Fig. 4. — User interface of the web-based decision support tool

also remained stable. The panel recommendations are largely in line with the Belgian consensus document which was published in 2003, just in-between the two panel studies (6). The consensus working group, in which none of our panellists participated, recommended referral for endoscopy in all patients with symptomatic GORD aged 50 years and older, as well as in patients < 50 years with persistent symptoms despite medication and/or having complicating conditions. The panel recommendations can be seen as a refinement of these statements, since they allow a more tailored approach including a number of specified (potentially) complicating factors. As the panel ratings are difficult to translate into written recommendations, we developed a web-based program, which aims to help practising physicians in making decisions about referral of patients with symptomatic GORD (Fig. 4). This program has recently been tested within the context of an educational program for general practitioners, in which around 160 GPs and 25 gastroenterologists participated. The program was perceived as being very valuable and 'thought provoking' as it allows the comparison of own decisions with those of the expert panel.

As regards the preferred type of medication, large differences were seen between general practitioners and gastroenterologists, particularly regarding patients without previous treatment and those with a relapse after H_2RA treatment. During the panel discussion, it was suggested that these differences may predominantly reflect the variations in patients seen in either general practice or specialised care. However, it is obvious that a step-up therapy (starting with H_2RA) was not preferred by the panel for the majority of patient profiles. Differences in preference between low and high dose of PPIs may also stem from the complex reimbursement system in Belgium that distinguishes between different classes of PPIs, of which a number are only reimbursed after an endoscopy is performed. Although the panellists were asked to assess the appropriateness of treatment from a merely clinical perspective, they shared the opinion that the reimbursement limitations may have influenced their opinion to some extent.

Further experience with the web-based program should provide insight into the usefulness of this tool in enhancing appropriate decision making on patients with symptomatic GORD in general practice.

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