Abdominal Symptom-related QOL in Individuals Visiting an Outpatient Clinic and those Attending an Annual Health Check

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Abstract

Objective Quality of life (QOL) impairment of patients who visit an outpatient clinic for abdominal symptoms has not been clarified. We investigated symptom-related QOL impairment that led patients to seek medical care.

Patients and Methods Abdominal symptom-related QOL was determined using the Izumo scale instrument in 172 patients who visited a clinic for their abdominal symptoms and in 961 healthy subjects who attended an annual health check.

Results QOL was more strongly impaired in the patients with abdominal symptoms than in subjects who attended health checks. Patients with heartburn consulted physicians even when QOL impairment was minimal, while those with epigastric fullness tended to consult a physician only when QOL impairment was significant.

Conclusion Abdominal symptom-related QOL impairment is considered to lead patients to seek medical care, though different symptoms have varying levels of influence.

Key words: questionnaire, heartburn, epigastric fullness, GERD, epigastric pain

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Introduction

Individuals visit preventive health care centers for an annual health check because of a general recommendation from the regional government as well as fear of possible neoplastic diseases. On the other hand, once abdominal symptoms develop, patients visit outpatient clinics when they fear the presence of serious diseases or think that their health-related quality of life (QOL) has been significantly affected. Abdominal symptoms are frequently reported to primary care physicians in an outpatient clinic setting (1, 2). Although impaired QOL is considered to be a major force to lead patients with abdominal symptoms to visit outpatient clinics, information regarding the extent of QOL impairment necessary for patients in Japan to consult physicians is limited (3).

We recently developed a self-reporting questionnaire, termed the Izumo scale, which is designed to determine QOL of patients with upper and/or lower abdominal symptoms (3). In the present study, we determined abdominal symptom-related QOL using the Izumo scale in patients who visited a gastroenterology clinic and in individuals who attended preventive medicine health checks conducted at the same institution. From our results, we discuss what type of QOL impairment is necessary for patients with abdominal symptoms to consult a physician.

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Materials and Methods

Patients

Consecutive patients who visited the outpatient gastrointestinal clinic of Matsue Red Cross Hospital with abdominal symptoms as their chief complaint from July to September 2010 were enrolled in this study. In addition, consecutive individuals who visited the Department of Preventive Medicine of Matsue Red Cross Hospital for an annual health check during the same period were also enrolled. From the individuals who visited for an annual health check, patients who had been treated for gastrointestinal diseases were excluded.

Determination of abdominal symptom-related QOL

The Izumo scale was designed by our group for the quantitative measurement of abdominal symptom-related QOL (Fig. 1). It is an abdominal symptom-specific quality of life questionnaire that includes 15 items in 5 domains: Reflux, Pain, Fullness, Constipation, and Diarrhea. Questions are rated on a 6-point Likert scale from 0 to 5, with higher values indicating more severe impact on daily functioning. The score for each question within a domain can be added to determine domain specific scores, i.e., questions 1, 2, and 3 are related to the Reflux domain, 4, 5, and 6 to the Pain domain, 7, 8, and 9 to the Fullness domain, 10, 11, and 12 to the Constipation domain, and 13, 14, and 15 to the Diarrhea domain. Careful validation of the Izumo scale as a self-reporting instrument has been performed, with good internal consistency, reproducibility, correlation with a visual analogue scale of abdominal symptoms and GSRS (4), responsiveness to treatment-related changes of QOL that is different from that to changes of simple abdominal symptoms (5), and acceptability by patients reported.

All enrolled subjects were requested to answer the questions of the Izumo scale questionnaire before being examined as a report of their abdominal symptom-related QOL in the 7 days prior to the visit, according to the instructions. This study was approved by our institutional ethical committee and informed consent was obtained from the subjects.
Izumo scale total scores of patients and healthy subjects. The patients had various grades of QOL impairment, while the healthy subjects mainly showed overall lower QOL impairment. Izumo scale total scores range from 0 to 75.

■: patients (n=172)
□: healthy subjects (n=961)

Statistics

Mean, median, and mode of QOL impairment were calculated and described. Statistical comparisons of QOL between patients with abdominal symptoms and subjects participating in annual health checks were performed using a Mann Whitney U test.

Results

We enrolled 172 patients with abdominal symptoms as their chief complaints (patients) and 961 individuals who attended health checks (healthy subjects) in the present study. The mean age of the patients was 58 ± 19 years old and 49% were male, while that of the healthy subjects was 54 ± 11 years old and 66% were male. All completed the Izumo scale questionnaire without difficulty within 10 minutes.

When the percentages of patients and healthy subjects with grade 3 (bothered) or higher scores for any of the questions of the Izumo scale were calculated, 71% and 18%, respectively, were found to have grade 3 or higher QOL impairment shown by at least 1 question. Furthermore, 49% of the patients had grade 4 (strongly bothered) or higher grades as compared to only 7% of the healthy subjects.

The distribution of total scores for the Izumo scale in the patients and healthy subjects is shown in Fig. 2. Maximum and minimum scores for impairment of abdominal symptom-related QOL are 75 and 0, respectively, with this instrument. The scores were distributed from 1 to 50 in the patients group and from 0 to 36 in the healthy subjects. The mode scores were 7 and 0, respectively, with 28% of the latter group with a score of 0, while the median scores were 15 and 4, respectively. Thus, the distribution of scores for the Izumo scale was significantly different between the groups (p<0.01).

The distributions of scores for the individual domains (Reflux, Pain, Fullness, Constipation, Diarrhea) in the patients (Table 1) and healthy subjects are shown in Fig. 3a-e. In the patients group, 34 (mean age 61 years, M/F=16/18), 44 (56 years, 18/26), 33 (59 years, 17/16), 50 (61 years, 23/27), and 41 (56 years, 26/15) complained of reflux symptoms, epigastric pain, epigastric fullness, constipation, and diarrhea, respectively, as their most bothersome abdominal symptoms. Domain-specific QOL impairment in the Izumo scale is ranked from 0 (no QOL impairment) to 15. For the patients, the median score for the Reflux domain was 4, while it was 6 for each of the other domains, while those for the healthy subjects were 0 and 1, respectively, which were significantly different as compared to the patient scores (p<0.01). Greater than 90% of the patients reported QOL impairment above 2 for each domain. In the patients group, the mean and mode scores for the Reflux domain (mean score 4.74, mode score 2) were smaller than those for the other domains (mean scores ranged from 6.34-7.03, mode scores from 3-6). Therefore, patients with heartburn were considered to visit a physician even when QOL was minimally impaired, while those with other symptoms visited a physician only when symptom-related QOL was strongly impaired.
impaired. Notably, patients with epigastric fullness as the most bothersome symptom waited to visit a physician with a much higher level of QOL impairment (domain specific mean score 7.03, mode score 6) in comparison to patients with heartburn symptoms.

Discussion

Our results showed that impairment of abdominal symptom-related QOL varied greatly between patients who visited physicians for abdominal symptoms and healthy subjects who attended an annual health check. In addition, they revealed that minimal impairment of reflux-related QOL led patients visit an outpatient clinic.

Self-reporting questionnaires have been widely used in the clinical practice. QUEST and FSSG are instruments used for the diagnosis of patients with gastroesophageal reflux disease with good sensitivity and specificity (6, 7). For evaluating QOL, general and disease-specific QOL questionnaires such as SF-8, QOLRAD-J and RE-specific questionnaires (RESQ) are used in Japan (8, 9). In this study we used the Izumo scale to measure QOL impairment in subjects with and without apparent abdominal symptoms. This instrument is an abdominal symptom-related QOL scale similar to the GRSR (4, 10); it is composed of 5 symptom domains for determining various abdominal symptom- and domain-specific QOL impairments. GRSR has been widely used to measure abdominal symptom-specific QOL impairments and is reported to clearly show the QOL changes in response to treatment in Japanese patients with abdominal symptoms (11, 12). However, in contrast to the GRSR and other general QOL scales, the Izumo scale was designed to detect QOL changes caused by abdominal symptoms frequently noted by Japanese patients (13-15). By this instrument, we have shown that the intensity of abdominal symptoms and the abdominal symptom-specific QOL impairment dissociate in certain conditions and that the measurement of QOL is important in the treatment of patients with abdominal symptoms (5). Because of its good sensitivity, reproduci- bility, and responsiveness, it has been widely used in Japan.

In the present survey, healthy subjects who attended annual health checks did not show highly impaired symptom-related QOL, as expected. As for the patients who visited a physician for their symptoms, those with epigastric fullness showed highly impaired QOL, while those with reflux symptoms showed less impairment. The reason for this difference is not clear at present. When an individual decides to visit a physician for their symptoms, several factors are considered to be possibly important, including fear of the possible presence of serious disease, abundant information regarding diseases that have similar symptoms, and QOL impairment (3). Heartburn and acid regurgitation are typical symptoms of gastroesophageal reflux disease (GERD). Because of the increasing number of individuals with GERD, medical information concerning the condition provided to the public is remarkably increasing. Guidelines for diagnosis and treatment were recently published by the Japanese Society of Gastroenterology, and distributed widely in Japan (16, 17). Thus, such information regarding GERD symptoms may lead patients with reflux symptoms to consult medical services even if QOL is not significantly impaired.

We found in the present study that patients with epigastric pain tended to consult physicians when milder QOL impairment was present (pain domain-specific mean and mode scores, 6.34 and 3, respectively), which was also suggested in our previous study (3). Epigastric pain is caused by many kinds of gastrointestinal and pancreatobiliary diseases, including gastro-duodenal ulcers (2, 18), while the most serious and frequently encountered disease that causes epigastric pain in Japan is gastric cancer. Many Japanese residents participate in annual upper gastrointestinal endoscopy screening because of fear of possible occurrence of gastric cancer, even when no symptoms are present. Therefore, once they experience epigastric pain, they may readily think of gastric cancer and visit a physician for evaluation of their symptoms. As suggested by the results of the present study, patients may consult physicians when they experience epigastric pain even without remarkable QOL impairment.

Constipation and diarrhea are frequently experienced symptoms that show high recurrence rates. Although they may be related to advanced colon cancer or inflammatory bowel disease, the link between these symptoms and cancer is not strong in the mind of the public, which is different from the perceived link between epigastric pain and gastric cancer (19, 20). Diarrhea is frequently caused by gut bacterial and viral infections, but not so frequently by neoplastic diseases and most of the general population do not link diarrhea with colon cancer. On the other hand, when they experience significant diarrhea-related QOL impairment, individuals may decide to consult a physician. Therefore, diarrhea-related QOL impairment (diarrhea domain-specific mean and mode scores, 6.66 and 6, respectively) may be high when visiting a physician.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Reflux</th>
<th>Pain</th>
<th>Fullness</th>
<th>Constipation</th>
<th>Diarrhea</th>
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<td>mean±SE</td>
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<td>6.34±0.56</td>
<td>7.03±0.69</td>
<td>6.66±0.45</td>
<td>6.66±0.51</td>
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<tr>
<td>median</td>
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<td>6.0</td>
<td>6.0</td>
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</tr>
<tr>
<td>mode</td>
<td>2.0</td>
<td>3.0</td>
<td>6.0</td>
<td>5.0</td>
<td>6.0</td>
</tr>
</tbody>
</table>
should be treated. Impaired QOL is considered to be a symptom and healthy subjects. Therefore, when only viewing domain-specific scores between patients with abdominal symptoms and healthy subjects, the distributions of total scores and various abdominal symptoms had different levels of QOL impairment with the Izumo scale showed that patients with abdominal sympotm-related QOL showed significantly greater impairment of abdominal symptoms than individuals who attended an annual health check. Furthermore, QOL impairment was strongest in patients with epigastric fullness who decided to visit a physician.

The present study of abdominal symptom-related QOL impairment with the Izumo scale showed that patients with various abdominal symptoms had different levels of QOL impairment when they decided to visit a physician. We found overlapping in the distributions of total scores and domain-specific scores between patients with abdominal symptoms and healthy subjects. Therefore, when only viewing Izumo scores, it is difficult to determine which patients should be treated. Impaired QOL is considered to be a strong facilitator of clinic visits, especially in patients with epigastric fullness and diarrhea, in Japan, though a variety of factors are likely important for triggering a clinic visit.

In summary, our results showed that patients who consult a physician had significantly greater impairment of abdominal symptom-related QOL than individuals who attended an annual health check. Furthermore, QOL impairment was strongest in patients with epigastric fullness who decided to visit a physician.
References


