

Gastrointestinal symptoms in the general population – prevalence, overlap and contact to general practice

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English summary:

Background

Gastrointestinal symptoms are frequent in the general population and common reasons for consultation with a general practitioner (GP). The symptoms are characterised by often being experienced as diffuse and of varying severity and implications for the individual. Three of the most common conditions are gastroesophageal reflux disease (GERD), functional dyspepsia (FD), and irritable bowel syndrome (IBS). In many cases it is possible to diagnose GERD, FD, and IBS with symptom-based diagnostic criteria, which might prevent risk of harm from unnecessary investigations by the healthcare system. Studies have investigated the prevalence of overlap between GERD, FD, and IBS and found the overlap to be greater than expected by chance, suggesting that there are distinct subgroups with overlap of GERD, FD, and IBS having a common pathophysiological mechanism. As a clinician it is important not to overlook more serious conditions, e.g. cancer. A number of cancer alarm symptoms have been defined for guidelines on referral for suspected cancer. According to these guidelines, experience of a number of well-defined alarm symptoms of gastrointestinal cancer requires further investigations. A prerequisite for GPs being able to refer patients for further investigations is that people become aware of their symptoms and present them to their GP. The issue of appropriate healthcare-seeking is often raised in connection with serious diseases, in particular in terms of patients' awareness and knowledge of symptoms. Some of the factors that can affect the decision to seek healthcare are symptom characteristics, impact on daily activities, personal experience with or witnessing of symptoms and disease, health perceptions, and network and social context.

In order to learn more about gastrointestinal symptoms and the process from experiencing a symptom to contacting the GP, it is important to study a large sample of the general population and explore symptoms, combinations of symptoms and overlap of functional symptom conditions.

Aim

The overall aim was, based on the development and implementation of a large population-based survey, to investigate different aspects of gastrointestinal symptom experiences, overlap of symptoms and contact to the GP in the Danish population.

Study I

To describe the development of a comprehensive questionnaire concerning experience of symptoms, interpretation, and subsequent consequences of symptom experiences with the specific objectives:

- 1) Conceptualisation of "symptom experience" and "healthcare-seeking", defining the domains to be measured, identification and inclusion of previously used and validated items, scales, and questionnaires, and development of single symptom items.
2. Pilot and field testing of the comprehensive questionnaire and assessment of the feasibility of the study.

Study II

To investigate the prevalence and overlap between GERD, FD, and IBS in the general population using the ROME III criteria and the Montreal definition.

Study III

- 1) To determine the prevalence of symptom experience in the general population with regard to specific and non-specific symptoms indicative of colorectal cancer, ^[SEP]2) To determine the proportion of people who contact their GP when experiencing one or more of these symptoms, ^[SEP]3) To explore possible age and sex differences in symptom experience and subsequent contact to the GP.

Study IV

- 1) To estimate the prevalence of symptom experience in the general population aged 45 years and above with regard to specific symptoms indicative of upper gastrointestinal cancer.
- 2) To estimate the proportion of people who contact their GP when experiencing specific alarm symptoms indicative of upper gastrointestinal cancer.
- 3) To estimate the proportion of people who contact their GP with a combination of specific and non-specific symptoms indicative of upper gastrointestinal cancer.

Methods

The study was designed as a nationwide cohort study of 100 000 people randomly selected from the general population. All Danish citizens are registered in the Danish Civil Registration System (CRS) with a unique personal identification number. From the CRS, 100 000 adults aged 20 years or above were randomly selected and invited to participate in a survey. The individuals received a postal letter explaining the purpose of the study. In the letter a unique 12-digit login for a secure webpage was included. This provided access to a comprehensive web-based questionnaire. In order to prevent exclusion of people with no access to a computer, tablet or smartphone, the participants were offered to complete the survey by telephone interview.

The questionnaire was designed to measure the prevalence of symptom experience in the general population and the individual's interpretation of symptoms and subsequent healthcare-seeking. Baseline data concerning self-reported experience of symptoms in the preceding four weeks and subsequent consequences together with personal and social characteristics were collected. The questionnaire was based on standard rating scales, previously validated questionnaires, and ad hoc items. In total, ten predefined specific and non-specific symptoms indicative of colorectal cancer were included. Moreover, seven specific and non-specific alarm symptoms of upper gastrointestinal cancer were included. These symptoms were selected based on a review of literature, national and international cancer referral guidelines and descriptions of cancer pathways. The respondents were asked whether they had experienced one or more of the symptoms within the preceding four weeks and additionally whether they had contacted their GP with the symptom.

The questions regarding FD and IBS were extracted from the ROME III adult questionnaire (RIIIAQ) and the questions regarding GERD were developed based of the Montreal definition. A pilot study was conducted as part of the feasibility assessment.

Results

A conceptual framework with regard to symptom experience and healthcare-seeking was developed. The final questionnaire consisted of five domains with 16 subdomains.

Of the 100 000 randomly selected subjects, 4 474 (4.7%) were not eligible because they had either died, could not be reached due to unknown address, were suffering from severe illnesses (including dementia), had language problems or had moved abroad. Of the 95 253 (95.3%) eligible subjects, 49 706 subjects filled in the questionnaire, yielding an overall response rate of 52.2%. The median age of the respondents was 52 years (IQR 40-64) compared to 50 years (IQR 36-66) for nonrespondents.

We found that 11.2% (n=5 387) fulfilled the criteria for GERD, 7.7% (n=3 668) for FD and 10.5% (n=4 939) for IBS. Among individuals meeting the criteria for one or more of the conditions GERD, FD and IBS, 30.7% had overlap between two or all three conditions.

Abdominal pain was the most common specific alarm symptom of colorectal cancer (19.7%), and tiredness was the most common unspecific alarm symptom (49.8%). A total of 38.8% of the women and 31.3% of the men had experienced at least one of the four specific alarm symptoms of colorectal cancer in the preceding four weeks.

Rectal bleeding was the alarm symptom of colorectal cancer with the highest proportion of GP contacts (33.8%). Apart from 'Abdominal pain' and 'Tiredness', no gender differences were found with regard to contacts to the GP for alarm symptoms of colorectal cancer. The combination of 'Weight loss' and 'Rectal bleeding' was the combination of two symptoms with the highest proportion of GP contacts (55.9%).

For people aged ≥ 45 years the prevalences of the four specific alarm symptoms of upper GI cancer ranged between 1.1% ('Repeated vomiting') to 3.4% ('Difficulty swallowing'). Women had statistically significantly higher odds of experiencing 'Repeated vomiting' and 'Persistent and recent-onset abdominal pain', but statistically significantly lower odds of 'Upper GI-bleeding' compared to men. People in the older age groups were more likely to contact their GP when experiencing specific alarm symptoms of upper GI cancer. The combination of 'Repeated vomiting' and 'Difficulty swallowing' was the combination of two alarm symptoms with the highest proportion of GP contacts (68.4%).

Conclusion

A comprehensive questionnaire comprising five domains with 16 subdomains covering the areas of symptom experience, symptom characteristics, reaction in response to symptom experience, external factors, and personality characteristics with potential influence on the symptom experience was developed. We succeeded in conducting a large survey providing the groundwork for the Danish Symptom Cohort. With 49 706 having completed the questionnaire, an overall response rate of 52.2% was achieved.

The three gastrointestinal conditions GERD, FD, and IBS are common conditions in a western adult population and overlaps between these symptom complexes are frequent.

Specific and non-specific alarm symptoms of colorectal cancer are common in the general population, the proportion of GP contacts did, however, not exceed 34% with single symptoms. When experiencing a combination of two specific alarm symptoms, the proportion contacting a GP was less than 50%. The combination of two symptoms with the highest proportion of GP contacts was a combination of a specific and a non-specific alarm symptom, suggesting that non-specific alarm symptoms influence people's decision to contact their GP.

Specific alarm symptoms of upper GI cancer are not common in the general Danish population. Gender differences were found in the experience of alarm symptoms. The proportion of GP contacts with each of the four specific symptoms did not exceed 40%. However, when experiencing a combination of two specific alarm symptoms, the proportion contacting a GP was not less than 52%.

Generally, the proportion of GP contacts was higher in the older age groups for both men and women with regard to symptoms indicative of upper gastrointestinal cancer and colorectal cancer.

Links

The Danish Symptom Cohort: Questionnaire and Feasibility in the Nationwide Study on Symptom Experience and Healthcare-Seeking among 100 000 Individuals

<http://www.ncbi.nlm.nih.gov/pubmed/25147736>

Overlap of symptoms of gastroesophageal reflux disease, dyspepsia and irritable bowel syndrome in the general population

<http://www.ncbi.nlm.nih.gov/pubmed/25525975>

Specific and non-specific symptoms of colorectal cancer and contact to general practice

<http://www.ncbi.nlm.nih.gov/pubmed/25977134>

Alarm symptoms of upper gastrointestinal cancer and contact to general practice -A population-based study

<http://www.ncbi.nlm.nih.gov/pubmed/25877333>