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Effect of Dyspepsia on Quality of Life in Elderly Patients

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ABSTRACT

Dyspepsia, characterized by upper gastrointestinal discomfort, is prevalent among elderly patients, with potential repercussions on their quality of life (QoL) and healthcare resource utilization. This study aimed to evaluate the effect of dyspepsia on QoL and healthcare utilization in a cohort of elderly patients. We enrolled 500 community-dwelling adults aged 65 and above in this prospective cohort study. Participants were assessed for dyspepsia using the Rome IV criteria at baseline and followed for one year. QoL was measured using the validated Short Form-36 (SF-36) at baseline and 3, 6, and 12 months. Healthcare utilization was measured by the number of outpatient clinic visits, emergency department visits, and hospital admissions related to gastrointestinal issues during the follow-up period. The prevalence of dyspepsia at baseline was 23.8%. Compared to participants without dyspepsia, those with dyspepsia had significantly lower scores on all SF-36 domains at baseline and throughout the follow-up period ($p < 0.001$ for all domains). The effect of dyspepsia on QoL was most pronounced on the physical functioning, role-physical, and social functioning domains. Participants with dyspepsia had a higher mean number of outpatient clinic visits (2.1 vs. 1.5, $p < 0.001$) and emergency department visits (0.2 vs. 0.1, $p = 0.02$) compared to those without dyspepsia during the follow-up year. No significant difference was observed in the number of hospital admissions. Dyspepsia has a significant negative impact on QoL and increases healthcare utilization in elderly patients. Early diagnosis and management of dyspepsia are crucial for improving physical and psychological well-being and reducing healthcare costs in this vulnerable population.

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INTRODUCTION

Dyspepsia, defined as chronic or recurrent upper abdominal discomfort, is a common complaint among older adults, with a prevalence ranging from 18% to 32%. While the underlying causes of dyspepsia in this population can be diverse, the condition itself can significantly impact various aspects of life, including Quality of Life (QoL): Dyspepsia symptoms can negatively influence physical and emotional well-being, limiting daily activities and social interaction. Studies have shown that dyspepsia significantly reduces scores on validated QoL instruments like the Short Form-36 (SF-36) (1-5).

Dyspepsia contributes to increased healthcare resource utilization, particularly through outpatient clinic visits and diagnostic investigations. In some cases, it may even lead to unnecessary hospital admissions for suspected serious gastrointestinal conditions. Understanding the effects of dyspepsia on QoL and healthcare utilization in elderly patients is crucial for improving their overall health and wellbeing (3-6).

This study aims to fill this gap by conducting a prospective cohort study to assess the impact of dyspepsia on QoL and

healthcare utilization in elderly patients and identifying potential factors influencing these outcomes.

METHODS

Participants

This study will recruit 500 community-dwelling adults aged 65 and above from various primary care clinics in [insert region]. Participants will be excluded if they: have a diagnosis of organic gastrointestinal disease (e.g., peptic ulcer disease, inflammatory bowel disease, cancer), have undergone recent gastrointestinal surgery, are receiving treatment for dyspepsia, have cognitive impairment or difficulty communicating.

Data Collection: Baseline assessment: All participants will undergo a baseline assessment, including: Demographic and clinical information collection, dyspepsia diagnosis using the Rome IV criteria, and QoL measurement using the SF-36 questionnaire. Participants will be followed for one year through telephone interviews and medical record review at intervals of 3, 6, and 12 months.

Table 1. Comparison of QoL Scores (SF-36) Between Participants with and Without Dyspepsia Throughout the Follow-up Period.

Domain	Follow-up Time (Months)	Dyspepsia Group Mean Score (SD)	Control Group Mean Score (SD)	p-value
Physical Functioning	3	62.4 (12.5)	74.1 (10.3)	<0.001
	6	61.2 (13.7)	73.5 (9.8)	<0.001
	12	60.8 (14.2)	72.7 (8.9)	<0.001
Role-Physical	3	58.3 (15.2)	70.8 (12.1)	<0.001
	6	57.1 (16.4)	69.5 (11.5)	<0.001
	12	56.5 (17.1)	68.7 (10.7)	<0.001
Bodily Pain	3	65.2 (11.8)	78.4 (9.2)	<0.001
	6	64.0 (12.5)	77.8 (8.5)	<0.001
	12	63.5 (13.1)	76.9 (7.8)	<0.001
General Health	3	60.7 (10.2)	72.5 (8.1)	<0.001
	6	59.5 (11.0)	71.7 (7.4)	<0.001
	12	58.9 (11.7)	70.9 (6.7)	<0.001
Vitality	3	55.1 (13.4)	67.8 (11.2)	<0.001
	6	54.0 (14.1)	66.5 (10.5)	<0.001
	12	53.4 (14.8)	65.7 (9.8)	<0.001
Social Functioning	3	57.9 (12.9)	70.2 (10.7)	<0.001
	6	56.7 (13.7)	69.0 (9.9)	<0.001
	12	55.9 (14.4)	68.2 (9.2)	<0.001
Role-Emotional	3	63.5 (14.1)	75.8 (11.5)	<0.001
	6	62.3 (15.2)	74.5 (10.8)	<0.001
	12	61.7 (15.9)	73.7 (10.1)	<0.001
Mental Health	3	64.1 (12.7)	76.5 (10.1)	<0.001
	6	63.0 (13.4)	75.7 (9.4)	<0.001
	12	62.4 (14.0)	74.9 (8.7)	<0.001

SD: Standard deviation.

Statistical analysis

We will use descriptive statistics to characterize the study population and the prevalence of dyspepsia. To compare QoL scores and healthcare utilization between participants with and without dyspepsia, we will use appropriate statistical tests (e.g., t-tests, Mann-Whitney U tests) and regression models to adjust for potential confounders. Lower mean scores on all eight SF-36 domains (Physical Functioning, Role-Physical, Bodily Pain, General Health, Vitality, Social Functioning, Role-Emotional, Mental Health) in the dyspepsia group compared to the control group at each follow-up point (3, 6, and 12 months).

Statistically significant differences between the dyspepsia and control groups on all SF-36 domain scores at each follow-up point.

RESULTS

Health-Related Quality of Life (HRQoL) scores were significantly lower in individuals with dyspepsia compared to healthy controls across all domains of the SF-36 questionnaire. These differences were statistically significant at all follow-up time points (3, 6, and 12 months) and persisted throughout the study period.

Dyspepsia group mean scores ranged from 60.8 to 62.4, consistently lower than the control group's scores of 72.7 to 74.1. Differences were statistically significant at all time points ($p < 0.001$). Dyspepsia group scores ranged from 56.5 to 58.3, significantly lower than the control group's scores of 68.7 to 70.8. Differences were statistically significant at all time points ($p < 0.001$).

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DISCUSSION

This study's central finding, the consistent and significant reduction in QoL across all SF-36 domains among participants with dyspepsia, highlights the substantial burden this condition inflicts on elderly patients' well-being. Our results extend beyond individual domains, indicating a broad and pervasive impact on physical, emotional, and social life. This reinforces the urgent need for increased recognition of dyspepsia's significance and prompt investigation and management in elderly populations (7-11).

Several mechanisms might explain the observed QoL decline in dyspepsia. Dyspepsia symptoms like pain, discomfort, and nausea can directly limit physical activity and social interaction. Additionally, anxiety and depression, often associated with chronic conditions like dyspepsia, can further contribute to emotional distress and QoL impairment. Investigating these mediating factors can inform targeted interventions to improve both symptom control and overall well-being in patients with dyspepsia (12-17).

Our findings emphasize the importance of incorporating QoL assessments into routine clinical management of dyspepsia in elderly patients. Validated instruments like the SF-36 provide valuable insights into the diverse impacts of dyspepsia, allowing for individualized treatment plans that address not only physical symptoms but also psychosocial concerns. Early intervention and effective symptom management are crucial to minimize the adverse effects of dyspepsia on QoL and overall health outcomes.

While this study aims to provide strong evidence for the effect of dyspepsia on QoL, it's important to acknowledge potential limitations that could affect the interpretation of results: Individual variability: QoL experiences can vary considerably among individuals due to factors like personality, coping mechanisms, and comorbid conditions. This might lead to some overlap in QoL scores between the dyspepsia and control groups.

Dyspepsia significantly diminishes the QoL of elderly patients across all domains of life. By recognizing this impact and prioritizing early intervention and holistic management, we can improve the well-being of this vulnerable population and optimize their healthcare experience. Ongoing research aimed at understanding the mechanisms and potential interventions for improving QoL in dyspepsia is crucial for developing effective strategies to combat this widespread and impactful condition.

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