

Original Article

PREVALENCE OF CONSTIPATION IN HEALTHY POPULATION, AN OBSERVATIONAL CROSS SECTIONAL STUDY

Asma Sikandar, Syeda Maryam Wasif, Mohsin Zaheer, Sarwat Nazir, Aasia Noor, Nadir Zafar Khan and Ahsan Numan

Objective: To assess the prevalence of constipation in healthy population, study was done at hospital employees and students at PGMI/Lahore General hospital, Lahore.

Methods: This was an observational cross sectional study done in sample population that includes employees and students at PGMI/Lahore general Hospital. All subjects were given set of questions which include 4 constipation related symptoms.

1 - Frequency of bowel movements on a scale of 0-4.

2 - Difficulty or painful evacuation effort on a scale of 0-4.

3 - Assistance required to evacuate.

4 - Duration of symptoms.

Total score was 15 of which 7 was the cut off score, people reporting score 7 and above were considered as constipated while below 7 were healthy non-constipated.

Results: Total 778 healthy individuals (clinically) interviewed. The age range was between 10 year to 60 years old. 66% participants were female whereas 34% were male. According to set of questions 14% participants reported constipation.

Conclusions: Constipation is a common complaint but poorly defined clinical constellation, the definition of constipation is different among studies, where most studies are based on a questionnaire and may result from organic condition. Overall, prevalence of constipation in adults has been estimated as 16% worldwide which is very close to our finding of 14% of healthy population reporting constipation. Demographics of subjects of most of 14% are female and above 55 years of age.

Keywords: constipation, healthy individuals, PGMI/Lahore General Hospital.

Introduction

Constipation is a common complaint but a poorly defined clinical constellation. It is difficult to describe normal bowel function but most people evacuate between three times per day and once every three days.¹ Marginal infrequency beyond this may be attributed to poor diet and frequently responds to bulk laxatives. The definition of constipation is different among studies, where most studies are based on a questionnaire and may result from an organic condition. Overall, the average prevalence of constipation in adults has been estimated as 16% worldwide (varies between 0.7% and 79%); whereas the prevalence of 33.5% was attributed to adults aged 60 to 110 years.² Several prior attempts have been made to study constipation. Drossman and coworkers³ surveyed 789 students and hospital employees and found that 18.5 percent strained at stool more than 25 percent of the time. Moreover, 4.2 percent reported to or fewer bowel movements per week. These figures were slightly higher than Thompson and Heaton⁴ reported in an earlier survey. Although

the survey by Drossman and colleagues queried abdominal pain, distention and incomplete evacuation, it did so in the context of diagnosis of irritable bowel syndrome rather than constipation. Much data have been published regarding psychological abnormalities in patients with constipation. One prior publication included a comparison of symptoms and type of constipation. It has been observed clinically in patients with Parkinsonism that constipation can be present as a part of Parkinson disease. Frequency of non-motor symptoms in Parkinson's disease presenting to tertiary care Centre in Pakistan: an observational, cross-sectional study,⁵ which showed that 56 percent of our population with Parkinson's disease had constipation; however, 31% had constipation before onset of disease.

Methods

This was an observational cross sectional study done in sample population that includes employees and students at PGMI/Lahore general Hospital. All subjects were given set of questions which include 4

constipation related symptoms.

- 1- Frequency of bowel movements on a scale of 0-4.
- 2- Difficulty or painful evacuation effort on a scale of 0-4.
- 3- Assistance required to evacuate.
- 4- Duration of symptoms.

Total score was 15 of which 7 was the cut off score, people reporting score 7 and above were considered as constipated while below 7 were healthy non-constipated. Clinically not diagnosed for any chronic disease like Diabetes, Hypertension, ischemic heart disease, cerebrovascular accidents. Both genders were included. Ages ranging from 10-60 were included. Marked abdominal pain or significant distention or cramping. Presence of any chronic medical condition that may preclude self-care laxative treatment (paraplegia, colostomy). Patients who presented with advanced severe and unstable disease like Diabetes, Mellitus, Hypertension, Ischemic heart disease). Subjects who presented with symptoms and signs of systemic medical conditions that could give rise to constipation like Hypothyroidism. Patients taking drugs that can cause constipation like opioids e.g. morphine, codeine, anti-cholinergic like atropine, trihexyphenidyl, Tricyclic antidepressants, Calcium channel blockers, anti-Parkinson drugs. Data with name, age, gender, occupational status and dietary habits were asked along designed questionnaire to fulfill all the inclusion and exclusion criteria. Questions regarding symptoms of different diseases that were mentioned in the exclusion criteria were asked. Data is analyzed by SPSS version 21 and is used to measure frequencies of responses per item. It has scoring range 1-6 that's normal, score 7 and above 7 is classified as constipated.

Results

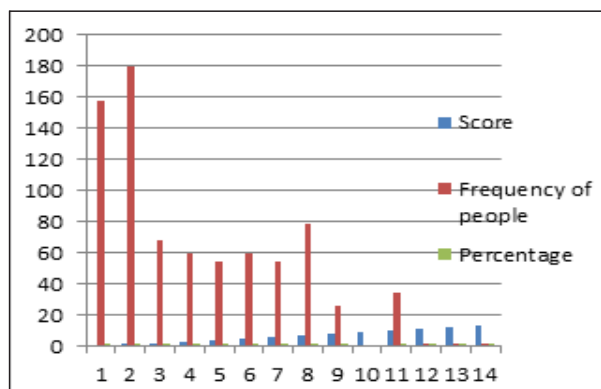
Total 778 healthy individuals (clinically) interviewed. The age range was between 10-60 years old.

Sixty six percent participants were female whereas 34% were male. According to set of questions 14% participants reported constipation.

Discussion

180/778 participants reported minimal intensity and scored 2/14. Pathophysiology and current therapeutic approaches towards Chronic Constipation was studied in a research in 2016 by

Sharma A. & Rao S. Later it was published in 2017 in a Pharmacology Journal. It is a common and persistent problem which is faced by a huge number of people worldwide. Term Constipation is defined as



X-axis: no of score, y-score: number of people.

Excessive straining, a sense of incomplete evacuation, lengthy or failed attempts to defecate, abdominal bloating or pain, hard consistency of stool and use of digital maneuvers for evacuation of stool by Sharma and colleagues.⁶ As participants of current research selected any 2 of 14 constipation criteria given in questionnaire. 76% population reported symptoms of constipation but with normal and healthy severity of it. Healthy severity as scored less than cut off score 7. This showed that prevalence among healthy population is at minimal concern. Leung, Riutta, Kotecha & Rosse in 2011 stated that Chronic Constipation is managed and treated by etiology and evidence-based causes. Dietary fibers, exercise and fluids are the standard advice to treat chronic constipation.⁷ For treatment point of view, such people can be guided and treated easily. And most of them do not consult health practitioners but change diet or follow domestic tips to overcome them. Only 6% research participants reported maximum score and that is 13 and 14. That might have some history, genetic factor or other biological issues, but they did not report any disease or diagnosed severe medical issue. Fourteen percent of healthy population reported symptoms of constipation interpreted as “constipated”, which is close to a study done in western countries, where prevalence rate was stated as between 2%-28%.⁹⁻¹¹ which is supported more closely by a study done in china,¹² which reported that only 14% of general population reported constipation which is exactly the same percentage observed in Pakistani population. Demographics of our study found that most of 14% are female and above 55 year, which is supported by retrieved studies evaluation where eleven studies

were retrieved; they reveal a prevalence of constipation that varied from 2.6% to 26.9%. The most frequently cited associated factors were female gender and advanced Age, which were cited in 11 and 7 of the studies, respectively. Prevalence rates reported by the selected studies were heterogeneous.⁸ higher prevalence in female gender is also supported by a systemic review done in North America⁹⁻¹⁰ where they found that females were more likely to report FC than males, which was consistent with that in North America, Europe, and Oceania For research concerns, researchers can be interested in finding out that is there any relationship of age and gender in diagnosis, prevalence and severity of constipation.

Conclusion

Constipation is a common complaint but poorly defined clinical constellation, the definition of constipation is different among studies, where most studies are based on a questionnaire and may result from organic condition. Overall, prevalence of constipation in adults has been estimated as 16% worldwide which is very close to our finding of 14% of healthy population reporting constipation. Demographics of subjects of most of 14% are female and above 55 years of age.

*Department of Neurology
Lahore General Hospital, Lahore
www.esculapio.pk*

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