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ORIGINAL ARTICLE

Functional Constipation during Pregnancy

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ABSTRACT

Aim: To establish whether or not functional constipation is commonplace among pregnant women in our cultural setting.
Methodology: A cross-sectional study was conducted in the Department of Obstetrics and Gynaecology, Sahiwal Medical College, Sahiwal, from June 2022 to December 2022. Three hundred and forty pregnant women were identified using the reliable Rome III criteria and enrolled. Constipation-related knowledge and demographic information, including the treatment method used, were identified through a questionnaire. SPSS version 21 was used for the statistical analysis.
Results: According to Rome Criteria III, 220(64.7%) pregnant women had functional constipation. Furthermore, the study described a statistically significant correlation (0.010) between the type of measure used to resolve constipation and experiencing functional constipation during pregnancy, with 26% of pregnant women using ispaghol. There is a statistically significant (p = 0.0001) correlation between functional constipation and awareness. Of the pregnant women in the present study who reported having functional constipation, 43% reported having good awareness about constipation and its consequences in pregnancy, while 30% reported being unaware of the fact (P = 0.010).
Conclusion: Functional constipation during pregnancy is prevalent. Additionally, majority of the women had a good understanding of the dangers of constipation during pregnancy.
Keywords: Pregnancy, Awareness, Constipation, Remedies

INTRODUCTION

Humans all throughout the world deal with the health problem of constipation[1,2]. Constipation encompasses a wide range of presentations, such as difficulty defecating, a sensation of incomplete evacuation or blockage in the anorectal area, stool consistency, a stool passage frequency of fewer than three per week, or the need for extra effort beyond intra-abdominal pressure to get stool passed, and the formulation of the proper explanation of constipation is still a matter of debate[3,4]. However, it is split into two categories: primary, functional, and idiopathic constipation, which is unrelated to any other pathological phenomenon[5,6] and secondary/secondary-related/secondary-cause constipation, which is a drug side effect or a manifestation of an ongoing disease, such as hypothyroidism, diabetes, scleroderma, irritable bowel syndrome, stroke, Parkinson's disease, and others[7-9].

Functional and secondary constipation are recognised as diseases and functional constipation contributes significantly to the global burden of constipation complaints. Reduced fluid and fibre intake, genetics, and psychological disorders are all thought to have a role in the development of functional constipation[11,12]. While functional constipation is not directly linked to an increased risk of death, it is a significant economic and quality-of-life detriment for those who suffer from it[13]. Constipation is a prevalent issue among pregnant women because of the many physiological changes that occur during pregnancy to allow for the growth and nourishment of the developing fetus[15].

Hormonal shifts are responsible for most of the observed changes, with an elevated progesterone level and its effect on smooth muscles being primarily responsible for the slowed transit of the gastrointestinal tract[5,14,16]. Mechanical changes, as the uterus pushes abdominal contents and causes slower motility, and lifestyle changes, especially a lack of exercise and an increased use of fat and protein in the diet, play small roles in addition to hormones. Similarly, one study indicated that hormonal factors accounted for most cases of constipation in the first trimester, whereas mechanical factors accounted for the majority of cases in the second and third trimesters[14].

Primary constipation1[7], which was either not handled seriously or not detected by the patient earlier, contributes significantly to this complaint since pregnancy exacerbates the condition[5,18]. Whatever the cause of chronic constipation, if it is not treated, it can weaken the pelvic floor muscles and support structures, which in turn can lead to uterovaginal prolapse[19]. Also, a previous study found that women who experience functional constipation are more likely to have their baby delivered via caesarean section than women who do not, and at the very least, the patient is left with discomfort and compromised daily life[2,19].

Since the risk of constipation is reported to be increased if the pregnant patient has a history of constipation during a previous pregnancy or has increased iron intake during the current pregnancy, it is imperative that it be recognised using a thorough clinical evaluation during antenatal visits. All confirmed instances should be handled as soon as possible[9,11]. However, the care may differ depending on whether the constipation is functional and unrelated to any illness or if there is a history of disease in the patient.

Recent clinical practice recommends dietary roughage and liquids for the treatment of constipation during pregnancy, with the use of allopathic drugs reserved for non-responding cases[14,11]. When general treatment options have been exhausted without success, it's time to see a specialist. Clinical approaches to this health concern have been ineffective due to a lack of epidemiological data, especially in this part of the globe, where constipation during pregnancy is common. The purpose of this research is to establish whether or not functional constipation is commonplace among pregnant women in our cultural setting.

A significant correlation was found between using specific measures for relieving constipation and functional constipation in pregnant women. 38% experienced functional constipation using Ispaghol. More research is needed to determine frequency and diagnose functional constipation early in pregnancy.

MATERIALS AND METHODS

After the ethical approval of the institutional review board, this cross-sectional study was carried out at the Department of Obstetrics and Gynaecology, Sahiwal Medical College, Sahiwal, from June 1st, 2022 to December 31st, 2022. Through non-probability consecutive sampling, women aged between 18 and 25 years old and between 37 and 41 weeks of pregnancy who were willing to cooperate with the research procedure, in good mental health, and able to talk and comprehend normally were included in

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the present study. Pregnant women with a history of cancer, rheumatic illness, blood disease, endocrine disease, or digestive disease who have trouble moving about, communicating, or following instructions with multifetal pregnancies were excluded from the present study. Sample sizes were determined with the use of the WHO-recommended open EPI. The Shamim study on functional constipation during pregnancy was utilised as the primary study for this sample size calculation. A sample size of 340 was calculated for the present study. After obtaining informed consent, postgraduates were tasked with interviewing all pregnant women visiting the outpatient department of the gynaecology unit to collect data on functional constipation using the Rome III criteria, which they did in both Urdu and English. Forms were completed by researchers and postgraduates under their supervision, guaranteeing the participants' anonymity. The purpose of the questionnaire was to learn about the respondent's obstetric history, to determine whether or not the respondent was experiencing functional constipation during her present pregnancy, and to gauge the respondent's attitude about constipation and its treatment. In order to diagnose functional constipation, the Rome III criteria were applied. In order to meet the criteria, a patient must experience at least two of the following symptoms for a minimum of 12 weeks: hard consistency of stool; needing excessive abdominal pressure to defecate; needing other methods to facilitate the passage; feeling of dissatisfaction after defecation; and sensation of an obstacle in the passage of stool. SPSS version 20 was used for the statistical analysis. The correlation was analysed using a chi-square test. A p-value ≤0.05 was considered to be significant.

RESULTS

The 19.11% were uneducated, and only 17.6% had graduation-level education. Most of the recruited participants were housewives (59%), and the least percentage of the recruited participants were nurses (11.7%). Among the recruited participants, the majority of the population has had previous births through normal vaginal delivery (69%). The research on pregnant women's knowledge of constipation and its complications found that 71% of pregnant women reported having constipation when asked by their doctor, while 29% said they hadn't (Table 1).

Table 1: Demographic variables of study participants

Variable	No.	%
Educational status		
Uneducated	65	19.11
Primary/Middle	85	25.0
High School	130	38.2
Graduate	60	17.6
Occupation		
Housewife	200	59.0
Teacher	55	16.2
Office job	45	13.2
Nurse	40	11.7
Mode of previous births		
Normal vaginal delivery	235	69.1
C-section	105	30.9
Pregnancy trimester		
1st	73	21.4
2nd	102	30.0
3rd	165	48.5
Housing		
Permanent	160	47.0
Temporary	180	53.0
Types of washroom		
Water closet	270	79.5
Commode	70	20.5

65% of pregnant women are aware of the health risks connected with constipation (Table 2). According to the Rome Criteria III (Fig. 1), 220(64.7%) of the 340 pregnant women had functional constipation. Furthermore, the study described a statistically significant correlation (0.010) between the type of measure used to resolve constipation and experiencing functional constipation during pregnancy, with 26% of pregnant women using Ispaghol as their primary measure. We found a statistically significant (p = 0.0001) correlation between functional constipation and awareness. Of the pregnant women in our study who reported having functional constipation, 43% reported having good awareness about constipation and its consequences in pregnancy, while 30% reported being unaware of the fact (P=0.010) [Table 3].

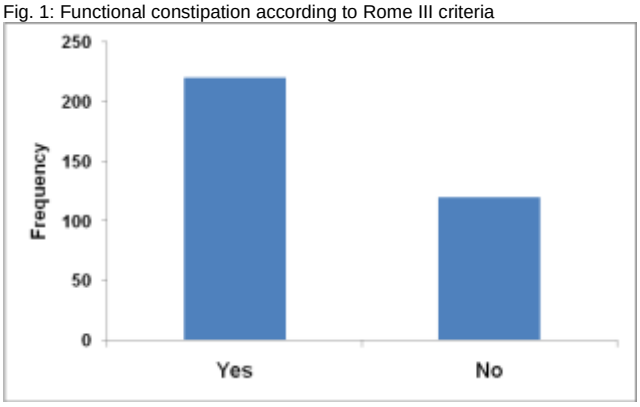
Table2: Descriptive analysis of patients according to Rome III criteria

Variable	No. (%)	
	Yes	No
Straining during at least 25% of defecation	188 (55%)	152 (45%)
Lumpy or hard stools in at least 25% of defecation	176 (52%)	164 (48%)
Sensation of incomplete evacuation for 25% of defecation	134 (39%)	206 (61%)
Sensation of ano-rectal obstruction/blockage 25% of defecation	120 (35%)	220 (65%)
Manual manoeuvres to facilitate at least 25% of defecation (digital evacuation or supports of the pelvic floor)	65 (19%)	275 (81%)
Fewer than three defecations per week	110 (32%)	230 (68%)
Loose stools are rarely present without the use of laxatives	120 (35%)	220 (65%)
Irritable Bowel Syndrome insufficient criteria	76 (22%)	264 (78%)
Did you tell your doctor about constipation?	243 (71%)	97 (29%)
Did the attending doctor ask specifically about constipation?	256 (75%)	84 (25%)
Measures used for constipation?	213 (63%)	127 (37%)
Do you know that constipation can cause haemorrhoids?	179 (53%)	167 (47%)
Do you know that constipation can cause health issues	220 (65%)	120 (35%)

Table3: Association of functional constipation with level of awareness

Variable		Yes	No	P Value
Type of Measures used for constipation	Ispaghol (Husk)	80 (36%)	45 (38%)	<0.0001
	Fruits & Vegetables	40 (18%)	30 (25%)	
	Homemade Remedy	45 (20%)	35 (29%)	
	Allopathic	55 (25%)	20 (17%)	
Awareness Score	Good Awareness	95 (43%)	35 (29%)	0.010
	Awareness	40 (18%)	23 (19%)	
	Slight Awareness	20 (9%)	15 (13%)	
	No Awareness	65 (30%)	47 (39%)	

Fig. 1: Functional constipation according to Rome III criteria



DISCUSSION

Constipation is a common gastrointestinal problem that affects a large percentage of the global population. Its pathophysiology is influenced by a number of variables. Functional constipation is a condition that does not have a clear anatomical or physiological cause. Numerous studies have shown that it is more prevalent among women and is more prevalent during pregnancy[2,11,12] Constipation, irritable bowel syndrome, diarrhoea, and haemorrhoids are all common complaints among pregnant women[21,22,23] and this increased incidence has been linked to physiological changes that increase susceptibility to these issues. In this research, we aimed to determine how common functional constipation is among pregnant women in Karachi. In addition, people's familiarity with the illness was evaluated.

The present research showed that 38.2% of the women who became pregnant had completed high school. Based on their analysis of 370 pregnant women's educational backgrounds, Aziz et al.24 found that the vast majority of them had completed secondary school. According to the data gathered, 59% of female respondents were stay-at-home moms. A similar conclusion was reached by Aziz et al.24, who also found that 65.9% of pregnant women were stay-at-home mothers. Constipation affects between 11 and 38% of pregnant women, according to a study by Vazquez et al. 21 In contrast, we found that 71% of the pregnant women in our research were dealing with constipation. In addition, 64.7% of the women in our research suffered from functional constipation. Similar results were found in another study that analysed 1698 patients from July 2012 to January 2014, suggesting that functional constipation is more common in pregnancy[2]. It has been noted that among pregnant women who had constipation, those with a master's degree or more were the most prevalent group. Women whose jobs encourage sedentary behaviours were shown to have a higher risk of constipation during pregnancy, according to the research[2].

According to our findings, pregnant women who suffer from functional constipation are more likely to be housewives. When asked about their preferred method of birth, pregnant women with functional constipation were more likely to choose a caesarean section (66.97%) than those without functional constipation (27.29%), as reported by Shi et al[2]. Among the pregnant women in the present study, we found that 69% had successful vaginal births, while 31% required a caesarean section. Functional constipation was shown to be more common in the first trimester (35%), followed by the second trimester (39%), according to research by Gomes et al[14]. In another study of 104 pregnant women, 75% were found to have functional bowel dysfunction in the first trimester[18]. Constipation is more common in the first trimester of pregnancy, as documented by Stukan et al.

Our research shows that almost half of all pregnant women have functional constipation throughout their third trimester. Sixty-eight percent of pregnant women, according to research by Aziz et al[24], did nothing to alleviate their constipation. Turkina et al.23 recommended that, if possible, dietary changes be made to alleviate constipation during pregnancy rather than resorting to medication. Increased fibre and hydration intake were cited as dietary treatments in research by Verghese et al. 23 In addition, research by Shi et al. found that these dietary changes reduced the risk of functional constipation in pregnant women. However, Farghali et al. (2011) found that dietary changes had no significant effect on constipation during pregnancy. A statistically significant ($p<0.0001$) correlation was found between the use of specific measures for relieving constipation and the occurrence of functional constipation; more specifically, 38% of pregnant women who used Ispaghol also experienced functional constipation. As very limited local data is currently available, more research and studies are required to determine the frequency of our obstetric population in a variety of settings. Doctors, nurses, and midwives need to learn more about the Rome III criteria for diagnosing functional constipation. Pregnant women would benefit from a better quality of life and fewer difficulties if the issue of constipation were treated early in the prenatal period.

CONCLUSION

Functional constipation is a common complaint among pregnant women (64.5%), yet only 71% of these women recognize and accept their bowel habits. This means that 29% of pregnant women with functional constipation were unaware that they had the condition. This is the group that needs our attention most; they are the unseen victims.

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1. Conception and design of or acquisition of data or analysis and interpretation of data.
2. Drafting the manuscript or revising it critically for important intellectual content.
3. Final approval of the version for publication.

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