

# Determination of the frequency of dyssynergic defecation and patient characteristics in patients with functional constipation

Fonksiyonel konstipasyonlu hastalarda dissinerjik defekasyon sıklığı ve hasta karakteristikleri

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**Background/aims:** Dyssynergic defecation, a subgroup of functional constipation, is a relatively new definition, diagnostic criteria of which have recently been described. Distribution of subgroups of functional constipation in our population is scarcely known. We aimed to evaluate the demographic characteristics and defecation features of patients as we determined the frequency of dyssynergic defecation in patients with functional constipation in our community. **Methods:** Eighty-two patients, 52 women and 30 men, with functional constipation were included in the study by using a questionnaire after secondary causes were excluded. Colonic transit time and balloon expulsion tests were performed to determine sub-groups of functional constipation. Colonoscopy and/or sigmoidoscopy in all patients and double contrast colonography in some patients were obtained at the beginning of the study to exclude anatomic and organic causes and patients with constipation predominant irritable bowel syndrome were also excluded from the study. **Results:** The results of the study revealed that functional constipation in our community occurs more frequently in women and at relatively older (middle to old) age. Patients with normal transit constipation pattern are the largest portion (52.4%) of patients with functional constipation, whereas dyssynergic defecation is the second most frequent (25.6%) reason among this population. **Conclusion:** The frequency of dyssynergic constipation is lower in our population compared to western communities, but the symptoms are similar. We believe that the questionnaire we used is helpful in revealing defecation characteristics and when combined with balloon expulsion test and colonic transit time measurements it can be a valuable tool in the diagnosis of dyssynergic defecation.

**Key words:** Dyssynergic defecation, constipation, functional, patient characteristics

**Amac:** Fonksiyonel konstipasyonun alt gruplarının toplumdaki dağılımı hakkında çok az şey bilinmektedir. Bu araştırma toplumumuzda fonksiyonel konstipasyonlu hastalardaki demografik karakteristikleri ve defekasyon özelliklerini tespit ederek, dissinerjik defekasyon dağılımını belirlemek amacıyla yapılmıştır. **Yöntem:** Konstipasyona neden olabilecek sekonder sebepler dışlandıktan sonra hastalara verilen anket formu ile fonksiyonel konstipasyonu olan 52'si kadın toplam 82 hasta çalışmaya alınmıştır. Fonksiyonel konstipasyon alt gruplarını belirlemek için hastalara kolon transit çalışması ve balon ekspulsiyon testi uygulanarak hastaların dağılım oranları tespit edilmiştir. Çalışma öncesinde tüm hastalara kolonoskopi ve/veya sigmoidoskopi, bazı hastalara ise çift kontrast kolon grafisi çekilerek anatomik ve organik nedenler dışlanmış, ayrıca anket formlarının değerlendirilmesi ile konstipasyonla seyreden irritable barsak sendromlu hastalar çalışma dışı bırakılmıştır. **Bulgular:** Çalışma verilerimiz fonksiyonel konstipasyonun toplumumuzda kadın hastalarda ve orta - ileri yaşlarda daha sık karşımıza çıktığını göstermektedir. Normal transitli defekasyon paterni gösteren hastalar (%52.4) en yüksek oranı oluşturmakla beraber dissinerjik defekasyon (%25.6) ikinci sırada fonksiyonel konstipasyon sebebi olmaktadır. Demografik özellikler bakımından yapılan analizde kadın ve erkek hastalar arasında fark gözlenmemiştir. **Sonuç:** Batı toplumları ile kıyasladığımızda dissinerjik defekasyon oranı bizim hastalarımızda daha düşük olarak gözlenmiştir ancak semptomlar benzerdir. Kullandığımız anket formunun defekasyon karakterlerinin belirlenmesinde çok yararlı olduğunu ve balon ekspulsiyon testi ve kolonik transit zamanı ile birlikte kullanıldığında dissinerjik defekasyon tanısı için çok yararlı bir araç olabileceğine inanıyoruz.

**Anahtar kelimeler:** Dissinerjik defekasyon, konstipasyon, fonksiyonel, hasta karakteristikleri

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## INTRODUCTION

Constipation is a common condition that causes symptoms like straining, hard stools, feeling of insufficient emptying, digitally assisted defecation, and decrease in frequency of defecation. Metabolic causes, fiber deficient diet, anorectal diseases and medications are common causes of constipation. When these reasons are excluded, functional constipation is the diagnosis and consists of these subgroups: normal transit constipation, slow transit constipation and defecation disorders (dyssynergic defecation) (1-4).

Although Rome II diagnostic criteria set is very helpful in diagnosing functional constipation, it has been suggested that this set of diagnostic criteria alone may not be sufficient for the diagnosis of dyssynergic defecation and addition of manometric test, balloon expulsion test and determination of colonic transit time with radio-opaque markers will allow an optimal evaluation of patients suspected of having functional constipation (5-7).

Failure of recto-anal coordination during defecation has been suggested as the main mechanism in dyssynergic defecation, and the diagnosis of this disorder is possible with a thorough history, determination of defecation pattern, detailed clinical evaluation and determination of anorectal physiology. In many clinical settings, a diagnosis of irritable bowel syndrome or slow transit constipation is made without sufficient evaluation and the treatment usually fails in these patients (7-10).

The aim of this study is (1) to determine the distribution of subgroups of functional constipation in constipated patients after excluding organic reasons, (2) to determine the frequency of dyssynergic defecation, and (3) to evaluate the efficiency of diagnostic methods used for the diagnosis of this condition, in our society.

The use, availability and validity of the tests to diagnose and differentiate subgroups of chronic constipation have been discussed, as well.

## METHODS

Adult patients with the complaint of constipation who were seen in the outpatient department of Gastroenterology between March 2005 and March 2007 have been included in this study, after excluding the organic diseases and other reasons (such as medications, metabolic diseases, dietary causes etc) that might have caused constipation.

The study has been approved by the ethics committee of Gulhane Military Medical Academy and the procedures have been performed according to the Declaration of Helsinki.

Written informed consent has been obtained from all patients and they were evaluated in detail (past medical and family history, physical examination and biochemical examination) and a barium enema colonography or pneumocolon CT and/or colonoscopy were performed to exclude secondary causes.

In patients with confirmed diagnosis of functional constipation, a questionnaire evaluating the demographic characteristics, stool forms, predisposing factors and symptoms accompanying defecation was used to determine the nature of functional intestinal disorder (see Attachment A). The questionnaire was not validated and the patients filled the questionnaires during an interview with their physician before enrolling in the study.

All patients underwent measurement of colonic transit time. For this purpose plain abdomino-pelvic x-rays were obtained on the day 5 (120 h) after oral administration of radio-opaque markers (Sitzmarks capsule-Konsyl Pharmaceuticals, Fort Worth, Texas) and the number of markers in the colon were counted. Conditions of patients who have >5 remaining markers in their colons were considered as "slow transit constipation".

Following colonic transit time determinations, all patients underwent balloon expulsion test to evaluate whether or not the balloon was expelled in three minutes.

At the end, patients were classified into three groups: Patients with normal transit constipation, those with slow transit constipation or those with defecation disorders (dyssynergic defecation). The demographic characteristics of these groups were evaluated and determined using the questionnaires and the groups were compared according to these results.

The evaluation process of the patients included in the study is summarized in Figure 1.

## Statistical methods

Statistical analysis was performed using a commercially available statistical package program (SPSS PC ver.15, USA). Categorized data were evaluated using Pearson's Chi-square test. Alpha degree was considered as 0.05 in all statistical measurements.  $P < 0.05$  was considered as significant.

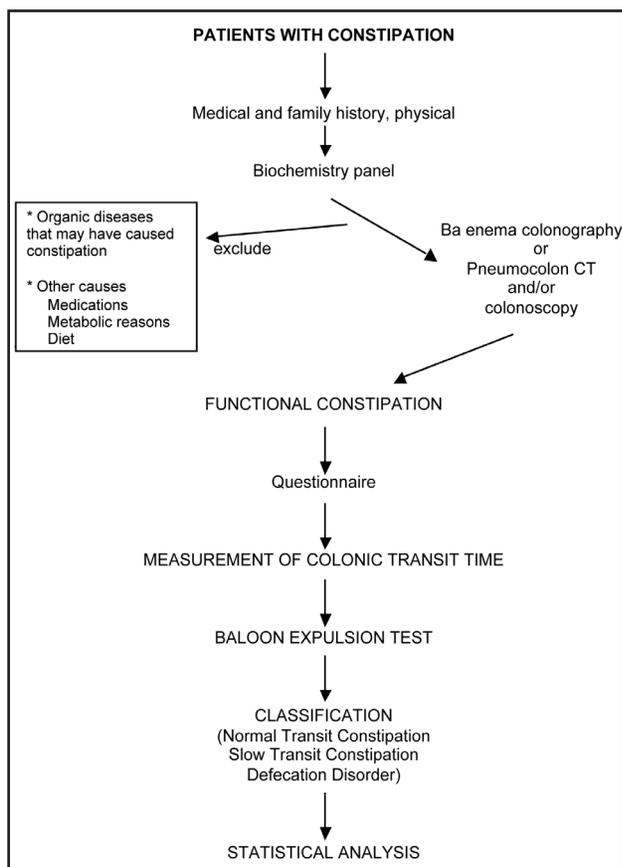


Figure 1. Evaluation of patients with constipation.

## RESULTS

Eighty two patients (52 females and 30 males), diagnosed to have functional defecation and dyssynergic defecation according to Rome II diagnostic criteria set, were included in the study. Demographic and some clinical characteristics are on Table 1.

It was apparent that the initiation of constipation was in adulthood in the majority of patients. Frequency of patients who define a precipitating cause was around 10%. For women trauma during labor and hysterectomy and for men prostatic diseases were the most common reasons and colonoscopy and/or colonography examinations were normal in all these patients without any statistical differences between male and female patients.

There was a high percentage of family history in all patients with significantly higher rates in women. There were no significant differences between genders for educational and marital status.

Colonic transit time measurement and balloon defecation tests in patients to identify the subgroups of patients with functional constipation revealed

normal transit in 28 patients (53.8%), dyssynergic defecation in 13 patients (25%), slow transit in 7 patients (13.4%) and dyssynergic defecation along with slow transit in 4 patients (7.6%). In male patients, 15 (50%) had normal transit, 8 (26.6%) had dyssynergic defecation, 5 (16.6%) had slow transit and 2 (6.6%) had dyssynergic defecation along with slow transit functional constipation. When all patients considered the distribution of subgroups was not significantly different between genders (Table 1).

As for defecation characteristics, 37.8% of patients had  $\leq 3$  defecation frequency per week. This ratio was 42.3% in females and was higher than males without statistical significance ( $P = 0.53$ ). Half of male patients experienced daily defecation whereas only a quarter of women reported the same. When straining periods were compared 50% of both males and females reported a period of 2 to 5 min. Longer periods ( $\geq 10$  min) were reported by almost a quarter of women and the difference between sexes was almost significant ( $P=0,06$ ). Feeling of "urge to defecate" was not different between genders ( $P = 0.70$ ) however the majority of both sexes reported this sensation "occasionally" (Table 2).

When symptoms that accompany defecation in patients with functional constipation were evaluated (Table 3), digital assistance was reported significantly more frequently in females (15.3% vs 3.3%) ( $P = 0.03$ ). In addition, "need for over straining" was also more frequent in females, but did not reach statistical significance ( $P = 0.42$ ). Incomplete evacuation was also more frequent in females without significant difference ( $P = 0.18$ ).

## DISCUSSION

Constipation without anatomic or secondary causes is functional constipation and the disease is the result of colonic or anorectal dysfunction (2, 3).

Table 1. Findings according to colonic transit time measurements

	Females	Males	Total	(%)
(1) Normal transit	52	30	82	(52.4)
(2) Dyssynergic defecation	28	15	43	(25.6)
(3) Slow transit	13	8	21	(15.8)
(4) Dyssynergic defecation + Slow transit	7	5	12	(7.3)
	4	2	6	

Colonic transit time measurement and balloon defecation tests revealed normal transit in 53.8%, dyssynergic defecation in 25%, slow transit in 13.4% and dyssynergic defecation along with slow transit in 7.6% of patients. In both sexes normal transit constipation was the predominant form of constipation.

**Table 2.** Defecation Characteristics

	Females n=52	Males n=30	Total n=82	P
Straining period				0.06 (*)
<1 min	7.6	20	12.1	
2-5 min	53.8	43.3	50	
5-10 min	17	23.3	19.5	
>10 min	21.1	13.3	18.2	
Defecation frequency				0.53 (**)
Daily	25	53.3	35.3	
>3 per week	26.9	16.6	23.1	
≤ 3 per week	42.3	30	37.8	
Other	5.7	0	3.6	
“Urge” sensation				0.70 (***)
None	17.3	13.3	15.8	
Occasional	53.8	63.3	57.3	
Frequent	28.8	23.3	26.8	

The difference between men and women was not significant in either straining period (\*), or defecation frequency (\*\*), or urgency (\*\*\*)). Females tend to have less frequent defecation without statistical significance (\*\*). Straining period was also longer in female patients but difference was not significant (\*). Urgency was not common in both genders (\*\*\*)).

**Table 3.** Symptoms that accompany defecation

	Females n=52	Males n=30	P
Need for over-straining			0.42 <sup>a</sup>
Always	50	46.6	
Frequently	38.4	30	
Occasionally	7.6	20	
None	3.8	3.3	
Sense of incomplete evacuation			0.18 <sup>b</sup>
Always	34.6	30	
Frequently	51.9	36.6	
Occasionally	11.5	26.6	
None	1.9	6.6	
Abdominal distention			0.53 <sup>c</sup>
Always	34.6	20	
Frequently	42.3	50	
Occasionally	17.3	20	
None	5.7	10	
Digital assistance			0.03 <sup>d</sup>
Always	7.6	6.6	
Frequently	15.3	3.3	
Occasionally	26.9	10	
None	48	80	

“Need for over straining”, incomplete evacuation and abdominal distention was slightly more frequent in females without statistical significance (<sup>a,b,c</sup>). Digital assistance was significantly more frequent in females (<sup>d</sup>).

Number of studies in this field is not enough, and methods and demographic characteristics are inconsistent. There are diagnostic difficulties since there is no single diagnostic test. Few studies reported dyssynergic defecation rates between 11% and 74%. The reason for such a wide range is the methodological differences and results suggest that dyssynergic defecation rates should be aro-

und 50% among these patients (4, 8). Constipation and dyssynergic defecation are more prevalent among females (3, 7).

When we evaluated patients with functional constipation, we observed a higher rate of dyssynergic defecation among females. We have also noted that constipation was more prevalent in women among our patient population. Interestingly, our results revealed a lower rate of dyssynergic defecation than what is reported from the western societies. In addition, the age range among our patients was much higher than previously reported (7). Rao et al (6) reported dyssynergic defecation more frequently among adolescents and young adults whereas majority of our patients were middle aged people.

The factors that precipitate defecation disorders have been evaluated in few studies and the rates have been reported between 15% and 38% (9, 10). In our study we evaluated these factors and observed that only 10.9% [much less than reported in the literature (6-8, 10)] (of patients have reported a precipitating factor. Five female patients (9.6%) have reported either hysterectomy or labor as the precipitating factor. Either prostate surgery or other abdominal surgeries have been reported as the precipitating factor by 4 men (13.3%). In the available medical literature, hysterectomy or other gynecologic interventions have been reported as the precipitating factor by 38% of female patients with dyssynergic defecation. We believe that functional constipation was accepted as “natural” by the majority of our patients and no correlation was established between constipation and the possible precipitating factors. This may be the reason for relatively lower percentage of reported precipitating factors.

In one study (10) positive family history was reported by 58% of patients and this rate among women was two times higher than men. This result has lead to the suggestion that environmental and genetic factors could play a role in the pathogenesis of dyssynergy. Similar to these findings, family history was positive in the majority of our patients and more female patients had a positive family history than men (69.2% vs 53.3%) (not statistically significant) in our series. We also believe that genetic, social and environmental factors can play a role in the pathogenesis of this disorder.

Nyam *et al* (11) evaluated treatment response and quality of life after surgery for chronic constipati-

on using colonic transit time and anorectal physiology tests. They reported that 59% of patients had normal transit constipation, 25% had pelvic floor dyssynergy, 13% had slow transit constipation and 3% had both pelvic floor dyssynergy and slow transit constipation.

We evaluated our patients using colonic transit time measurement and balloon expulsion test. Of female patients, 28 (53.8%) had normal transit constipation, 13 (25%) had dyssynergic defecation, 7 (14.4%) had slow transit constipation and 4 (7.6%) had combination of the latter two. In males, this distribution was 15 (50%), 8(26.6%), 5 (16.6%) and 2 (6.6%).

In the study of Nyam *et al* (11) pelvic floor dyssynergy (dyssynergic defecation) frequency was reported as 25%. The use and clinical utility of diagnostic tests for the diagnosis and differential diagnosis of constipation have changed significantly since the publication of this study. Rao *et al*, in their meta-analysis (12), have evaluated the usage and clinical utility of diagnostic tests for constipation and evaluated an approach to set a standard for these tests. The sensitivity, false positive/negative characteristics and validity of these tests were reported and can be used as a guide for future studies.

Epidemiological studies reveal a wide range for dyssynergic defecation (11%-74%, mean 50%) (7, 13). We observed dyssynergic defecation in 25.6% of our cases whereas normal transit and slow transit constipation were seen in 52.4% and 15.8% of cases.

Physiological tests used in the diagnosis of constipation include colonic transit time measurement, anorectal manometry, electromyography (EMG), balloon expulsion test and defecography. Tests other than colonic transit time and balloon expulsion tests are available only in tertiary centers and have a higher cost. Colonic transit time measurement and balloon expulsion test, however, are both less expensive and readily available in primary and secondary health care centers. It is suggested that these tests can provide valuable information in the determination of both patients with functional constipation and its sub-groups (3). We also agree on the suggestion that these methods can simply differentiate patients in each subgroup and enable us to better treat these patients since the treatment approach is different in these sub-groups of patients (1, 2, 4).

Most commonly used colonic transit time measurement today is oral administration of 24 radio-opaque markers followed 120 h later by a single plain abdominal film. Observation of  $\leq 5$  opaque marker in x-ray supports normal transit, whereas  $>5$  opaque markers suggest slow transit. This gives objective and validating information about colonic transit, but can be insufficient to differentiate subgroups of constipation when used alone (1, 14).

Anorectal manometry has an important role in the determination of defecation pattern and type and in the evaluation of anorectal physiology. Because it is not available in many centers, it is impossible to evaluate functional constipation in all cases. Methodology and standards in the use of this test varies widely and the standards have been set recently. Use of this test enables differentiation of dyssynergic defecation from chronic constipation and it is thus possible to determine candidate patients for bio-feed back therapy, which is the most appropriate approach in the treatment of this disease, and avoid unnecessary medical and surgical interventions (15-17).

Although defecography can give some information on the evaluation of underlying structural and organic disorders in patients with symptoms and defecation characteristics suggestive of dyssynergic defecation, it is important to note also that this is an expensive test and is not readily available in most medical centers. In addition the results can be conflicting depending on the expertise of the physician who performs the test (12).

Balloon expulsion test is another method, which is easy to perform. Patient compliance is also very high. It has been reported that its specificity is 89 %, negative predictive value is 97 %, sensitivity is 88 % and positive predictive value is 67 % (18). This test can also help determine patients with a dyssynergic defecation pattern to refer them to appropriate specialists for appropriate treatment (*i.e.* bio-feedback treatment) (19-22).

Epidemiological studies reveal that specific symptoms like digital assistance for defecation, a long period of over straining, incomplete evacuation feeling and less than once-a-week defecation are frequently seen in patients with dyssynergic defecation. Searching for these symptoms is an important step in the diagnosis of subgroups of patients with chronic constipation (6, 7, 10, 19, 22).

In our series, digital assistance during defecation was significantly more frequent in females than

men (15.3% vs 3.3%, ( $P = 0.03$ ). Tendency to strain for a long period was more common among women (always in 50%, frequently in 38,4%), without statistical significance ( $P = 0.42$ ). Feeling of insufficient evacuation was also more common among women (always in 34.6%, frequently in 51.9%) but the difference did not reach statistical significance ( $P = 0.18$ ).

The weakness of our study is the lack of anorectal manometry test and thus subgroups of dyssynergic defecation was impossible to determine, but we believe that we have obtained important information with the use of balloon expulsion test for this purpose.

Our results have revealed that the frequency of dyssynergic constipation is lower in our population compared to western communities, but similar to those countries it is more common among women and the symptoms are similar. No difference was seen between educational and social status of patients. Dyssynergic constipation is generally seen at middle age (between 50 and 55) in both women and men. In almost half of patients with functional constipation normal colonic transit time and normal defecation pattern were observed and

this suggests that these patients can benefit dietary precautions and some medical and social treatment approaches. As for the concomitant symptoms, digital assistance during defecation was observed more significantly frequent in women.

Dyssynergic defecation frequency in our study was 25%, and our results suggest that referral of these patients, to centers where sophisticated tests like anorectal manometry and treatment modalities like biofeedback are available, is necessary. Demographic characteristics did not reveal any significant difference between men and women.

Although the frequency of dyssynergic defecation is lower in our community, this percentage can be revealed more accurately with studies performing anorectal manometry along with other tests.

The questionnaire we used is helpful in revealing characteristics of defecation (over straining, insufficient evacuation feeling, digitally assisted defecation etc) and we believe that the questionnaire we used is helpful in revealing defecation characteristics and when combined with balloon expulsion test and colonic transit time measurements it can be a valuable tool in the diagnosis of dyssynergic defecation.

**ATTACHEMENT-A**

*(This is a translation of the original questionnaire)*

**DEPARTMENT OF GASTROENTEROLOGY  
CONSTIPATION QUESTIONNAIRE**

*This questionnaire will help us obtain as much information as possible and guide us for optimal treatment.*

*Please give correct and complete answers. All this information will be strictly confidential.*

*If you think there is more than one answer, please check all that apply.*

*We will go through all your answers during your next outpatient visit.*

**1) Your name:**

**5) Referring physician:**

**2) Detailed address:**

**6) Current marital status:**

Phone numbers (including area code):  
Home:      Office:      GSM:      E-mail address:

Married       Single       Widow  
 Divorced       Separated       Other

**3) Your age: .....**

**7) Last school you graduated from ?**

**4) Your gender:**       Male       Female

≥ 4-year-university       College       High school  
 Secondary       Elementary       None

8) When did your constipation started? \_\_\_\_\_

9) Was there a specific reason that caused your constipation?

- No
- Yes (If yes please give brief explanation): \_\_\_\_\_

10) Either successful or do you try a bowel movement daily? If yes, how many times?

- <1 (not daily)     1     2-3     4-6     >6

11) Has there been a change in your bowel habits in the last year?

- No     Yes (please explain) : \_\_\_\_\_

12) Define your bowel movement frequency.

- Daily     Every other day     Every 3 to 4 days
- Once a week     Other \_\_\_\_\_

13) How long do you need to strain during defecation?

- <1 minute     2 - 5 minutes     5 - 10 minutes
- 10-20 minutes     Other \_\_\_\_\_

14) Give details about the amount of your stool in each bowel movement?

- Very little     moderate
- too much     other : \_\_\_\_\_

15) Which one of the following fits the type of your stool? (Please circle your answer)

**Bristol Stool Chart**

1. Separate hard lumps, like nuts (hard to pass)



2. Sausage-shaped but lumpy



3. Like a sausage but with cracks on its surface



4. Like a sausage or snake, smooth and soft



5. Soft blobs with clear-cut edges (Passed easily)



6. Fluffy pieces with ragged edges, a mushy stool



7. Watery, no solid pieces  
**ENTIRELY LIQUID**

None    From time to time    Frequent    Very Frequent    Almost always

16) Do you feel urgency before bowel movement? (urge to defecate)

- 

17) Do you have a need to strain?

- 

18) Do you have an incomplete evacuation feeling?

- 

19) Do you have abdominal distention?

- 

20) Do you have a need to digital assistance to take your stool out?

- 

21) Do you apply pressure on your vagina or perineal area to initiate or complete your defecation?

- 

22) Do you have a feeling that there is something obstructing your anus (anal outlet)?

- 

23) Have you ever noticed blood in your stool?

- 

24) Do you take any fiber-containing products for constipation (bran, etc.)?

- 

25) Do you use laxatives or enema to defecate?

- 

26) Have you ever hospitalized for intestinal obstruction?

- Not     Yes (please give details):

27) Do you have abdominal pain? If yes, which part of your abdomen? (If your answer is no go to question 30)

- Upper abdomen     Lower right side
- Lower left side     Everywhere     Anus

28) Please, define your pain.

- Dull     Pressure     Cramps
- Burning     Penetrating

**29)** Give us information about your pain characteristics.

- Gets worse after a meal
- gets better after a meal
- Increase during or after bowel movement
- Gets better after a bowel movement
- sleep related

(Please specify) \_\_\_\_\_ Other \_\_\_\_\_

**30)** (for our female patients) How many pregnancies did you have?: .....

Give us your details about births? (Please check all that apply)

- Normal (vaginal)
  - With episiotomy (vaginal incision) and stitches
  - No episiotomy. With tears, and stitches.
  - No episiotomy, no tear, no stitches
  - I do not know these details
  - Forceps assisted
  - Vacuum assisted

**31)** Have you ever had low back pain, lumbar injury or herniated disk?

- No     Yes,

If yes, please give details: \_\_\_\_\_

**32)** Please write medications you are currently using (including those for your intestinal problems)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**33)** How much liquid do you drink in 24 hours? Please specify:

(1 glass = 200 ml)

Liquid	glass					
	0	1-3	4-6	7-9	10-12	≥13
Water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coffee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soda, coke, fanta etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Milk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**34)** Which of the following complaints you think you have ?

Specify the frequency using the letters in the box:

- |                          |                   |
|--------------------------|-------------------|
| _____ Nausea             | _____ Vomiting    |
| _____ Bloating           | _____ Gaseousness |
| _____ Dyspepsia          | _____ Fatigue     |
| _____ Belching (burping) | _____ Depression  |
| _____ Anxiety            | _____ Chest pain  |

- None (N)
- Occasional (O)
- Frequent (F)
- Very frequent (VF)
- Almost always (AA)

**35)** Have you ever had surgery? Please specify:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**36)** Is there any other family member with similar complaints?

- Father      Specify: \_\_\_\_\_
- Mother      Specify: \_\_\_\_\_
- Brother      Specify: \_\_\_\_\_
- Sister      Specify: \_\_\_\_\_
- Children      Specify: \_\_\_\_\_

**37)** Does your constipation effect your...

	None	Rarely	Frequent	Very Frequent	Almost always
a. ... social life?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. ... job?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. .... sexual life?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. .... your relationship with your family?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**38) During your childhood...**

a. did you have constipation problems?

Yes  No

b. did you use laxatives ?

Yes  No

c. did you use bathroom outside your house ?

Yes  No

(i.e., did you use the bathroom at school when you need?)

We believe that we will be more helpful with all this information in this questionnaire.

We appreciate your time to fill it out.

If you would like to add anything please use the back of this form or additional sheets.

*Thank you very much.*

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