THE ASSOCIATION OF BOWEL DYSFUNCTION AND FIBROMYALGIA SYNDROME

Birkan Sonel[1], Deniz Evcik[2]

SUMMARY

Fibromyalgia (FS) is a rheumatological syndrome that affects 1-5% of the population. Irritable bowel syndrome (IBS) is a complex of symptoms and mostly associate with FS.

This study investigated the relation of FS with IBS. Fifty (34 women,16 men) patients with primary FS according to 1990 ACR criteria and 50 (37 women,13men) healthy subjects as control group were included in the study. A detailed questionnaire about bowel dysfunction was used.

Bowel dysfunction was observed in 30 FS patients whereas none in controls. Thirty-three of the FS patients had abdominal distension as compared to 11 of the controls. In FS group 19 patients had constipation and 18 had diarrhea whereas 2 (p=0.011) had constipation and 4 (p=0.03) had diarrhea in control group.Thirty-five patients reported stress-related bowel dysfunction in FS group and only 1 in healthy control(p=0.00001). There was no statistically difference in laxative use between two groups (p>0.05). As a result according to self-administered questionnaire 29 of FS group had IBS (p=0.00001).

In conclusion bowel dysfunction should be carefully assessed and appropriate medical therapy should be given to IBS patients with FS.

Key Words: *Fibromyalgia, bowel dysfunction.*

ÖZET

BARSAK FONKSİYON BOZUKLUĞUNUN FİBROMİYALJİ SENDROMU İLE İLİŞKİSİ

Fibromiyalji toplumun %1-5'ini etkileyen romatizmal bir hastalıktır. İrritabıl barsak sendromu ise bir semptomlar kompleksi olup sıklıkla fibromiyaljili olgulara eşlik etmektedir.

Bu çalışmada 1990 ACR kriterlerine göre tanı alan 50 (34 kadın, 16 erkek) fibromiyalji sendromlu hasta ile 50 sağlıklı bireyde barsak fonksiyon bozuklukları ve irritabl barsak sendromu sıklığı araştırılmıştır. Barsak fonksiyon bozukluğuna ait semptomlar özel bir sorgulama ile değerlendirilmiştir.

Barsak fonksiyon değişikliği 30 fibromiyalji hastasında ifade edilmişken, sağlıklı gruptan hiç kimse böyle bir yakınma dile getirmemiştir. Otuzüç FS'li hastada abdominal distansiyon tespit edilirken kontrol grubunda 11 olguda tespit edilmiştir. Fibromyalji grubunda 19 hastada konstipasyon, 18 olguda diyare saptanmışken kontrol grubunda 2 (p=0.011) kişide konstipasyon ve 4 kişide de (p=0.03) diyare gözlenmiştir. Fibromiyalji grubunda barsak fonksiyon bozukluğu 33 hastada, kontrol grubunda ise sadece 1 kişide stresle ilişkili bulunmuştur (p=0.00001). Laksatif kullanım oranlarında ise her iki grup arasında istatistiksel farklılık tespit edilmemiştir (p>0.05). Yapılan sorgulama sonuçlarına göre FS grubunda 29 hastada IBS olduğu saptanmıştır (p=0.00001).

Sonuç olarak FS'da barsak fonksiyon bozukluğu dikkatli değerlendirilmeli ve IBS olan hastalara medikal tedavi uygulanmalıdır.

Anahtar Kelimeler: *Fibromiyalji, barsak fonksiyon bozukluğu.*

INTRODUCTION

Fibromyalgia (FS) is a rheumatological syndrome which affects 1-5 % of the population. The full spectrum of the FS encompasses core features that are present in most patients, and common fe-

[1] *Ankara University, School of Medicine, Department of Physical Medicine and Rehabilitation, Ankara, Turkey*

[2] *Kocatepe University, School of Medicine, Department of Physical Medicine and Rehabilitation, Afyon, Turkey*

atures that are present in more than 25 percent of patients. About one third of patients have commonly associated problems such as irritable bowel sydrome, tension headaches, premenstrual syndrome, Raynaud's phenomenon (1).

Irritable bowel syndrome (IBS) is considered to be the most common in all gastrointestinal disorders. Irritable bowel syndrome presents with disparate symptom complexes such as abdominal pain mostly related to defecation, alternating diarrhea and constipation, abdominal distension, gas and excessive mucus in the stool (1,2).

The purpose of this study was to determine the prevalence of symptoms of bowel dysfunction and irritable bowel syndrome in patients with fibromyalgia and compare to normal controls.

MATERIALS AND METHODS

Fifty patients (34 female, 16 male) with primary FS according to 1990 ACR criteria and 50 healthy subjects (37 female, 13 male) as control group were included in the study. Presence of fatigue, morning stiffness, sleep disturbance, anxiety, headache were asked. All participants were asked to respond to a gastrointestinal symptoms questionnaire described by Drossman et al. in order to evaluate symptoms of the IBS (3). Patients with alternating bowel function and one or more of the other (abdominal pain, constipation, diarrhea) were defined as having symptoms of bowel dysfunction.

Statistical analysis was performed using chi-square and student t test.

RESULTS

The patient's mean age was 33.9 ± 8.3 years in FS group and 32.2 ± 10.2 years in normal control group. The mean disease duration was 3.5 years. Age and gender did not differ significantly between the groups (Table I).

Table I. Characteristics of the study groups

	Fibromiyalgia	Control	p
Age (mean ±SD)yr	33.9 ± 8.3	32.2 ± 10.2	>0.05
Sex (F/M)	34/16	37/13	

Fatigue (82 %), morning stiffness (56 %), sleep disturbance (72 %), anxiety (74 %) and headache (72 %) was significantly higher in FS patients than normal controls ($p< 0.00001$).

Alternating bowel function was observed in 30 (60 %) FS patients whereas none in control group ($p=0.00001$). Thirty-three of the FS patients had abdominal distension as compared to 11 (22 %) of the controls ($p=0.00002$). Thirteen (26 %) of the FS group had mucus in the stool and 15 (30%) had absence of complete evacuation. In control group none had mucus and only 1 (2 %) had absence of complete evacuation ($p=0.0004$). In FS group 19 patients (38 %) had constipation and 18 (36 %) had diarrhea whereas 2 (4 %) had constipation ($p=0.011$) and 4 (8 %) had diarrhea in control group ($p=0.03$). Thirty-five (70 %) patients reported stress related bowel dysfunction in FS group and only one (2 %) in healthy control ($p=0.00001$). There was no statistically significant difference in laxative usage between groups ($p>0.05$). According to self questionnaire 29 (58 %) of FS group had IBS ($p=0.00001$)

DISCUSSION

The symptoms of FS are defined as widespread musculoskeletal pain, multiple tender points, Raynaud's phenomenon, premenstrual tension, anxiety, depression, IBS, fatigue, headache, paresthesia and sicca symptoms. Most of the symptoms represent a pattern of generalized somatic distress. Only tender points are objective clinical finding in physical examination(4). This shows the importance of the anamnesis in FS inorder to determine the other symptoms such as IBS.

Chang reported the association of functional gastrointestinal disorders and fibromyalgia(5). The main difference was the response to somatic and visceral stimuli. Patients with FMS had somatic hyperalgesia whereas IBS patients without coexistent had somatic hypoalgesia to mechanical stimuli. Visceral hyperalgesia may be related to psychological distress which plays an important role in FS. But in Chun's study rectal algesia in FM patients was not significantly different from either controls or IBS patients. Rectal hyperalgesia was not a function of chronic functional pain or phsychological distress and specific for IBS (6)

In chronic fatigue syndrome which shows very similar symptoms like FS, gastrointestinal disorders such as IBS were also reported (7).

Barton et al reported the increased prevalence of FMS and IBS and they suggested that the prevalence of fibromyalgia in IBS was aproximately half that of IBS in fibromyalgia (8). Whereas Buskila showed that fibromyalgia was common in IBD, particulary in Crohn's disease (9).

The overlap of gastrointestinal disorders and FS have been reported in previous studies (2,10). There are different results about the coexistence of bowel dysfuction and FS. The data showed that in 81% of the FS patients had normal alternating with irregular bowel pattern, 63% had alternating diarrhea and constipation whereas none had in healty group (2). The complaints were abdominal gas (59%), nausea (21%),diarrhea (9%) constipation (12%) and abdominal pain (64%) which is stress-related in 47%. Yunus et al. diagnosed IBS in 34% of the fibromyalgia patients(11). Wolfe reported that 33% of the FS patients had diarrhea and 43% constipation with abdominal pain in a ratio of 46% (12). Bengston et al found that in 44% of the fibromyalgia patients had IBS (13). In the other studies IBS was diagnosed 50% (14,15).

Sivri et al reported that IBS was in 41.8% of fibromyalgia patients and 16% in normal controls(16). In our study the ratio of IBS is 58% and the symptoms of constipation and diarrhea were 38% and 36%. We also found that bowel dysfunction was stress-related in 70% of fibromyalgia patients whereas none in healthy controls. The ratio of the symptoms such as constipation and diarrhea differ in various studies. Probably this depends on the nature of diet that may change by culture. High incidence of laxative use which may relate to a different perception of bowel normality was reported in FS patients but there was not any difference between groups in our study. Laxative use may also change according to the populations.

In this study we confirm that an association was found between bowel dysfunction and irritable bowel syndrome and fibromyalgia. Physicans treating FS patients should be aware of this association which may provide new insights to pathogenesis and treatment.

REFERENCES

1. Bennet M. Fibromyalgia and the facts. Rheumatic Dis Clin North Am 1993;19(1):45-59.
2. Triadafilopoulos G, Simms RW, Goldenberg DL. Bowel dysfunction in fibromyalgia syndrome. Digestive Diseases and Sciences 1991:36(1):59-64.
3. Drossman DA, Sandler RS, McKee DC, Lovitz AJ. Bowel patterns among subjects not seeking health care.Use of a questionnaire to identfiy a population with bowel dysfunction.Gastroenterology 1982;83:529-534.
4. Block SR. Fibromyalgia and the rheumatism. Rheumatic Dis Clin North Am 1993;19(1):61-78.

5. Chang L. The association of functional gastrointestinal disorders and fibromyalgia. Eur J Surg Suppl 1998;583:32-36.
6. Gomborone JE, Gorard DA, Dewsnap PA, Libby GW et al.Prevalence of irritable bowel syndrome in chronic fatique. J R Coll Physicians Lond 1996;34:512-513.
7. Chun A, Desautels S,Slivka A, Mitrani C et al. Visceral algesia in irritable bowel syndrome, fibromyalgia and sphincter of oddi dysfunction, type III. Dig Dis Sci 1999;44:631-636.
8. Barton A, Pal B,Whorwell PJ, Marschall D. Increased prevalence of sicca complex and fibromyalgia in patients with irritable bowell syndrome. Am J Gastroenterol 1999;44: 1898-1901.
9. Buskila D, Odes LR,Neumann L,Odes HS. Fibromyalgia in inflamatory bowel disease. J Rheumatol 1999; 26(5):1167-1171.
10. Sperber AD, Atzmon Y, Neumann L, Weisberg I et al.Fibromyalgia in iritable bowel syndrome: studies of pervalence and clinical implications. Am J Gastroenterol 1999;94: 3541-3546.
11. Yunus M, Masi AT, calabro JJ, Miller KA et al. Primary fibromyalgia(fibrositis). Semin Arthritis Rheum 1981;11:151-171.
12. Wolfe F. The clinical syndrome of fibrositis. Am J Med 1986; 81(3A):7-14.
13. Bengtssone A, Henriksson K, Jorfeldt L, Kagedal B et al. Primary fibromyalgia. A clinical and laboratory study of 55 patients. Scand J Rheumatol 1986;15:340-347.
14. Campbell SM, Clark S, Tindall EA, Forehand ME et al.Clinical characteristics of fibrositis. A blinded controlled study of symptoms and tender points. Arthritis Rheum 1983; 26: 817-825.
15. Romano TJ. Coexistence of irritable bowel syndrome and fibromyalgia syndrome. W Va Med J 1988;84:16-18.
16. Sivri A, Cindas A, Dinçer F, Sivri B. Bowel dysfunction and irritable bowel syndrome in fibromyalgia patients. Clin Rheumatol 1996;94:283-286.