

Prevalence of fibromyalgia in patients with irritable bowel syndrome

İrritabl barsak sendromu olan hastalarda fibromyalji prevalansı

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Background/aims: Irritable bowel syndrome is a functional bowel disorder which is characterized by afferent visceral hypersensitivity. It is frequently observed in patients with fibromyalgia but the presence of fibromyalgia in patients with irritable bowel syndrome has not been well defined. The aim of this study was to assess the prevalence of fibromyalgia and associated symptoms in patients with irritable bowel syndrome. **Methods:** Seventy-eight patients with irritable bowel syndrome diagnosed according to Manning's criteria and 70 age and gender matched controls were included in the study. Diagnosis of fibromyalgia was made using the criteria of the American College of Rheumatology for fibromyalgia. Patients were questioned about associated symptoms and subjective replies were recorded. **Results:** Eighteen of 78 irritable bowel syndrome patients (23.1%) and four of 70 controls (5.7%) had fibromyalgia. The presence of associated symptoms with fibromyalgia in patients and controls were as follows: sleep disturbance (41% vs 12.9%), fatigue (75.6% vs 18.6%), tiring easily (79.5% vs 15.7%), morning stiffness (38.5% vs 0%), paresthesia (32.1% vs 5.7%), headache (52.6% vs 27.1%) and sicca symptoms (feeling of dry eyes and mouth) (15.4% vs 0%). **Conclusions:** These results indicate that fibromyalgia and associated symptoms frequently coexist in irritable bowel syndrome. Common pathogenic mechanisms may have a role in both disorders.

Key words: Irritable bowel syndrome, fibromyalgia.

INTRODUCTION

Irritable bowel syndrome (IBS) is a functional bowel disorder associated with abdominal distension, abdominal pain and features of defecation disorders. No abnormal laboratory tests or organic pathology of the gastrointestinal tract are observed in IBS (1, 2). Fibromyalgia (FM) is a musculoskeletal syndrome that is characterized by generalized pain and tender points at certain anatomic locations. Other clinical features of FM are fatigue, sleep disturbances, headache, paresthesias, Raynaud's like syn-

Amacı: İrritabl barsak sendromu, afferent visseral hipersensitivite ile karakterize bir fonksiyonel barsak hastalığıdır. Fibromyaljisi olan hastalarda sık olarak gözlenir. Diğer yandan irritable barsak sendromu olan hastalarda fibromyalji varlığı iyi tanımlanmamıştır. Bu çalışmanın amacı, irritable barsak sendromu olan hastalarda, fibromyaljisi ve ilişkili semptomların prevalansını araştırmaktır. **Yöntem:** Tanısı Manning kriterlerine göre konulmuş irritable barsak sendromu olan 78 hasta ve kontrol olarak yaş ve cins olarak benzer 70 birey çalışmaya alındı. Fibromyalji tanısı, Amerikan Romatoloji Cemiyetinin fibromyalji için saptadığı kriterlere göre konuldu. Fibromyalji ile ilişkili semptomlar katılanlara soruldu ve subjektif yanıtları saptandı. **Bulgular:** Yetmiş sekiz irritable barsak sendromlu hastanın 18'inde (%23.1) ve 70 kontrol bireyin 4'ünde (%5.7) fibromyalji saptandı. Fibromyalji ile ilişkili semptomlar, irritable barsak sendromlu hastalarda ve kontrol grubunda şu oranlarda bulundu: uyku bozukluğu (%41'e karşı %12.9), halsizlik (%75.6'ya karşı %18.6), kolay yorulma (%79.5'e karşı %15.7), sabah sertliği (%38.5'e karşı %0), parestezi (%32.1'e karşı %5.7), baş ağrısı (%52.6'ya karşı %27.1) ve gözlerde ve ağızda kuruluk hissi (sicca semptomları) (%15.4'e karşı %0). **Sonuç:** Bulgularımız, fibromyalji ve ilişkili semptomlara, irritable barsak sendromlu hastalarda sıklıkla rastlandığını ortaya koymaktadır. Bu bozukluklarda, ortak patogenetik mekanizmaların rolü olabilir.

Anahtar kelimeler: İrritabl barsak sendromu, fibromyalji.

dromes, dry mouth and eyes, depression and anxiety (3, 4). In a previous study, Wolfe et al. (5) determined the prevalence of FM in the general population to be 2.0% for both sexes, 3.4% for women and 0.5% for men. The prevalence of FM was found to increase with age, with the highest rate being observed between 60 and 79 years of age.

The cause of the pain in IBS is hypersensitivity to the distension of bowel. The abnormal afferent (sensory) information that is processed by the central nervous system

Table 1. Prevalence of fibromyalgia and associated symptoms in patients with irritable bowel syndrome (IBS) and controls.

	<i>IBS</i> (<i>n</i> =78)	<i>Controls</i> (<i>n</i> =70)	<i>p value</i>
Fibromyalgia	18 (23.1%)	4 (5.7%)	0.005
Sleep disturbance	32 (41%)	9 (12.9%)	0.000
Fatigue	59 (75.6%)	13 (18.6%)	0.000
Easy tiredness	62 (79.5%)	11 (15.7%)	0.000
Morning stiffness	30 (38.5%)	0 (0%)	0.000
Paresthesia	25 (32.1%)	4 (5.7%)	0.000
Headache	41 (52.6%)	19 (27.1%)	0.002
Sicca symptoms	12 (15.4%)	0 (0%)	0.000

may lead to overexpression of visceral afferent stimuli (6, 7). On the other hand, somatization or psychogenic disorders such as anxiety or depression may coexist with IBS (8). Somatic hypersensitivity may also be predominant in FM (9).

Previous reports have demonstrated that the frequency of IBS is increased in FM when compared to healthy controls (10-12). Since there are common clinical features in IBS and FM, it may be possible that there are shared pathophysiological mechanisms.

The aim of this study was to examine the presence of FM and the other associated clinical findings in IBS and to compare them with healthy control subjects.

MATERIALS AND METHODS

Seventy-eight patients with IBS (24 male, 54 female; mean age 40.9±11.1 years) and 70 controls (mean age 39.4±11.7 years; 24 male, 46 female) were included in the study.

The criteria of Manning were used to make the diagnosis (13), and patients with three or more of the symptoms were accepted as IBS. The diagnosis of FM was made according to the presence of diffuse pain (pain above and below the waist and including both the right and left sides of the body) for at least three months and a count of 11 or more tender points using the 18 sites specified in the American College of Rheumatology 1990 Classification criteria for fibromyalgia (3).

Patients were questioned about the presence or absence of the symptoms which are commonly associated with FM such as sleep disturbance, fatigue, tiring easily, morning stiffness, paresthesia, headache and feeling of dry eyes and dry mouth (sicca symptoms) and subjective replies were recorded. A simple questionnaire for symptoms was completed by the participants to answer the following

questions:

a-Have you had fragmented sleep or awakening on most nights during the last three months? Yes/No;

b-Have you felt fatigued on most days during the last three months? Yes/No;

c-Have you felt unduly tired on most days during the last three months? Yes/No;

d-Have you had morning stiffness on most days during the last three months? Yes/No;

e-Have you felt a tingling sensation in your limbs on most days during the last three months? Yes/No;

f-Have you suffered with headache on most days during the last three months? Yes/No;

g-Have you had feeling of dry eyes or dry mouth on most days during the last three months? Yes/No.

Student's T test, a chi-square test or Fisher's exact test were used for statistical analysis and appropriate. P value below 0.05 was considered to indicate statistical significance.

RESULTS

There was no significant difference between the groups according to age and gender ($p=0.440$ and $p=0.648$, respectively). Eighteen of 78 patients (23.1%) with IBS and four of 70 controls (5.7%) fulfilled the criteria for FM. The associated symptoms of FM were also found to be higher in IBS patients when compared to those of controls (Table 1). Two of the 18 patients with FM were male and 16 were female.

DISCUSSION

IBS is not limited to the digestive system and patients with IBS may have other symptoms of physical stress such as FM (14). The presence of common symptoms of functional gastrointestinal disorders and FM in the same patients suggests a common etiopathogenesis in these disease. Up to 70% of patients with FM may have symptoms characteristic of IBS (15), although a lower prevalence of IBS had also been observed in patients with FM in various studies (10, 11).

The results of our study demonstrated the increased presence of FM and associated symptoms in IBS. We found that 18 of 78 patients with IBS (23.1%) and four of 70 controls (5.7%) had FM. In previous studies, Sperber et al. (2) found the prevalence of FM to be 31.6% while Barton et al (16) reported it as 28% in patients with IBS.

The extraintestinal symptoms of IBS may be explained by alterations in the interactions between the nervous system, viscera and musculoskeletal system (14). The pathogene-

sis of IBS is attributable to disordered motility or altered visceral sensation in the colon, rectum or small bowel. The balloon distension causes pain in patients with IBS while it does not do so in healthy subjects. The pathophysiology of IBS may be mediated by the nervous system innervating the gut. The defect could be contained entirely within the enteric nervous system at the level of the sensory receptor but dysfunction of the extrinsic innervation originating within the motor pathways of the vagus nerve or within the central nervous system may also contribute to the process (17). Psychosocial factors such as personality disorders, anxiety, depression, somatization or stress may also affect the pathophysiology of IBS (8).

Although muscle or fascia was once thought to be the source of pain in FM, the absence of pathologic findings in these tissues and the absence of laboratory changes that could be attributable to the muscles led to conclusion that FM must be a psychogenic rheumatism (18). Somatic hypersensitivity may contribute to the pathogenesis of FM (9) and a secondary hyperalgesia of peripheral nerve origin may also play a role (18). In fact, it has been suggested that functional disorders such as FM, IBS, migraine, primary dysmenorrhea and chronic fatigue syndrome share a common pathogenesis and the name of 'Dysfunctional Spectrum Syndrome' has been proposed (19).

Presence of sicca symptoms is another problem in IBS patients. We observed sicca symptoms in 15.4% of IBS patients while it was not found in any of the control subjects. Sicca symptoms are characterized by dry eyes and mouth, which usually accompanies Sjögren's syndrome in

the presence of aberrant immune function (16). In our study, the increased prevalence of sicca symptoms in IBS patients may be explained as a component of 'Dysfunctional Spectrum Syndrome'.

In conclusion, IBS symptoms may overlap with those of FM and some other functional disorders. The presence of symptoms common to all of these disorders may suggest a common pathogenic mechanism, but there is probably no single cause. Psychosocial distress and neuroendocrine factors may contribute to the pathophysiology of these conditions. Further studies are needed to understand the cause of these functional disorders.

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