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Irritable bowel syndrome prevalence in city center of Sivas

Sivas bölgesinde irritabl barsak sendromu sıklığı

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Background/ aims: *We planned to determine irritable bowel syndrome prevalence in our region with its distribution according to clinical characteristics of patients and the factors which are considered to be related with irritable bowel syndrome.* ***Methods:*** *998 of 1250 individuals (mean age 38.99+0.44) replied to our questionnaire including Rome II criteria.* ***Results:*** *We found the irritable bowel syndrome prevalence in the city center of Sivas to be 19.1%. Distribution of irritable bowel syndrome (+) patients age groups showed no significant difference but irritable bowel syndrome was significantly more common in females. The most common occupation showing irritable bowel syndrome positivity was workers. Irritable bowel syndrome prevalence was also significantly higher in persons not eating three regular meals per day. There was a significantly positive correlation between irritable bowel syndrome prevalence and psychological events, previous abdominal operations and infections. A change in bowel habitus was observed in 41.8% of irritable bowel syndrome patients, and the most common change was constipation. 39.8% of the irritable bowel syndrome patients had applied to the doctor, most often to doctors of internal medicine. We found the irritable bowel syndrome prevalence not to be related with educational status, smoking, daily tea and coffee consumption, alcohol intake, menstrual periods or weight loss.* ***Conclusion:*** *Irritable bowel syndrome prevalence in our region with its demographic characteristics was similar to the results seen in western countries.*

Key words: Irritable bowel syndrome, prevalence, Rome II criteria

Amaç: *Bu çalışmada bölgemizdeki irritabl barsak sendromu prevalansının saptanması ile bu hastaların klinik özellikleri ve irritabl barsak sendromu'nu etkileyebilecek faktörlerin dağılımının bulunması amaçlanmıştır.* ***Yöntem:*** *1250 bireyden ortalama yaşları 38.99+0.44 olan 998 birey Roma II kriterlerini içeren anketimizi cevaplamıştır.* ***Bulgular:*** *Sivas il merkezinde irritabl barsak sendromu prevalansını %19.1 olarak saptadık, irritabl barsak sendromu saptanan bireylerin yaş grupları arasında farklılık gözlenmezken, irritabl barsak sendromu 'nin kadınlarda daha sık olduğu gözlemlendi. (p<0.05) Meslek olarak da işçilerde daha fazlaydı, irritabl barsak sendromu pozitifliği üç öğün düzenli yemek yemeyenlerde anlamlı derecede daha yüksekti, irritabl barsak sendromu prevalansı ile psikolojik olaylar, önceki karın ameliyatları ve enfeksiyonlar arasında anlamlı bir ilişki saptandı. Hastaların %41.8' inde barsak alışkanlığında değişiklik vardı ve en sık görülen değişiklik konstipasyondu. Hastaların %39.8'inin doktora başvurduğu ve en sık olarak da iç hastalıkları uzmanına başvurdukları görüldü, irritabl barsak sendromu prevalansının eğitim durumu, sigara içimi, günlük çay kahve tüketimi, alkol alımı, menstrüel periyodlar ve kilo kaybıyla ilişkili olmadığı saptandı. Sonuç: Bölgemizdeki irritabl barsak sendromu prevelansı çalışmasının sonuçlarının demografik özellikleri ile birlikte batılı ülkelere benzediğini saptadık.*

Anahtar Kelimeler: irritabl barsak sendromu, prevalans, Roma II kriterleri

INTRODUCTION

Irritable bowel syndrome is widely recognized as one of the most commonly encountered gastrointestinal disorders. Irritable bowel syndrome-related symptoms are seen in the adult age group with a ratio of 9-22% (1). The average age in which symptoms initiate is 25-35 years in women (2). There is bimodal distribution in men and the disease usually forms two peaks at the ages of 30 and 50 (3).

Irritable bowel syndrome affects the life quality of the patients and causes economical losses (4). The annual healthcare cost for IBS is estimated to be 8 billion dollars in the USA (5). In one study, absenteeism over one year averaged 13.4 days for patients with IBS compared with 4.0 days for controls (6).

Studies about IBS prevalence in Turkey are scarce in spite of its importance. Little information is

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available concerning the incidence, prognosis and risk factors among patients, and reports are not comparable because definitions of IBS vary from one study to another (7).

In this study prevalence of IBS in our region was investigated by using the latest Rome II criteria.

METERIALS AND METHODS

Our investigation was a cross-sectional study which was performed between 23 January and 23 May 2001 in the city center of Sivas. One thousand two hundred and fifty persons over 20 years old who were selected by systematic sampling method were included in the study, and 998 individuals accepted to complete the questionnaire. Rome II criteria was used.

RESULTS

We found IBS prevalence in our region to be 19.1%, and it was significantly more common in women. Distribution of IBS (+) patients according to age groups was not significant ($p>0.05$), but we observed IBS prevalence to decrease as age increased (Tablel).

Irritable bowel syndrome did not show any significant difference according to educational status ($p>0.05$), but it had a significant relation with occupational status ($p<0.05$) (Table2). IBS was observed to be significantly increased in persons not eating three regular meals per day, and in subjects without fiber in their diet ($p<0.05$). IBS showed no significant relation with daily tea or coffee consumption, smoking, or alcohol intake ($p>0.05$). IBS prevalence increased as the daily cola intake increased ($p<0.05$) (Table 3).

There was a significant relation between IBS and previous abdominal operations, infections or psychological events ($p< 0.05$) (Table 3).

Changes in bowel habitus were observed in 41.8% of IBS (+) patients, with the most common being constipation. We did not find significant correlation between IBS and menstrual periods in women ($p>0.05$).

39.8% of IBS (+) patients applied to the doctor. IBS showed no correlation with weight loss ($p>0.05$), but hemorrhoid prevalence was increased in IBS (+) cases ($p<0.05$) (TableS).

Table 1. Distribution of IBS (+) subjects according to age groups

Age Group	IBS (+) (n)	IBS (-) (n)	Total (n)	IBS (+), (%)
20-29	68	252	318	21.2
30-39	48	211	259	18.5
40-49	42	142	184	22.8
50-59	19	98	117	16.2
60+	14	106	120	11.7
	191	809	1000	19.1

Table 2. Demographic data [n, (%)] of respondents with and without IBS type syndromes

		IBS (-) (%)	IIBS (+) (%)	P
Gender	Female	385	123 (24.2)	p=0.000
	Male	420	68 (13.8)	p<0.05
	Total	805	191 (100)	
Formal education (years)	0-5	189	50 (21.5)	
	5-8	80	18 (18.4)	p=0.397
	9-12	320	61 (16)	p>0.05
	12+	226	62 (21.5)	
Occupational status	Officers	31	77 (19.4)	
	Workers	80	27 (25.2)	
	Housewives	173	54 (23.5)	p=0.012
	Students	47	10 (17.5)	p<0.05
	Other	186	23 (10.9)	

DISCUSSION

Irritable bowel syndrome is a functional bowel disease, which occurs frequently with relapses and is affected by age and sex (7). IBS patients constitute 20-50% of the referred patients to gastroenterology clinics, with women more often seeking medical help (8-10). It has been suggested that race, ethnic origin, and social and cultural factors can affect IBS prevalence (11). In our study IBS prevalence was significantly higher in women, but this may be attributed to their easier expression of physical complaints when compared to men.

Kay et al. investigated IBS prevalence in a town in Denmark and observed that age had an inverse relationship with IBS prevalence (7). Likewise Talley et al. performed a study in Olmsted county and found that the most common age group showing IBS positivity was 50-59 years. In our study we found an inverse relationship between age and IBS prevalence, perhaps because individuals might ignore IBS-related symptoms as their organic diseases become manifest with increased age.

Guthire et al found that IBS-type symptoms are not related with educational status, while Drossman, Longstreth, and Kruis suggested that IBS prevalence is lower in patients with a higher socio-economic status (12-14). In our study, although IBS prevalence did not show any significant difference according to educational status, its occupational distribution was significant.

Table 3. Characteristics of respondents with and without IBS-type symptoms

		IBS(-) (%)	IBS (+) (%)	P
Three regular meals per day	Present	556	108 (16.1)	p=0.001
	Absent	249	83 (25)	p<0.05
Fiber consumption	Present	512	107(17.2)	p=0.047
	Absent	293	84 (22.3)	p<0.05
Daily tea consumption	1-2 cups/day	457	113 (19.7)	p=0.584
	7+ cups/day	348	78 (18.3)	p>0.05
Daily coffee consumption	1-2 cups/day	777	184(19.1)	p=0.890
	+3 cups/day	28	7(20.1)	p>0.05
Daily cola consumption	1-2 cups/day	770	175 (18.4)	p=0.022
	3+ cups/day	35	16 (31.6)	p<0.05
Smoking	Present	319	70 (17.8)	p=0.404
	Absent	486	121 (19.9)	p>0.05
Regular alcohol intake	Present	76	17 (17.9)	p=0.753
	Absent	729	174 (19.2)	p>0.05
Laxative Use	Present	43	39 (46.4)	p=0.00
	Absent	762	152 (16.6)	p<0.05
Previous abdominal operation	Present	90	39 (29.8)	p=0.001
	Absent	715	152 (17.5)	p<0.05
Previous psychological stress or infection	Infection	108	35 (24.1)	p=0.015, p=0.004
	Psychological stress	87	59 (39.9)	p<0.05
Relationship wit me strual periods in women	Present	247	126 (33.4)	p=0.232
	Absent	82	49 (37.4)	p>0.05
Relationship with weight loss	Present	28	6(17.6)	p=0.826
	Absent	777	185 (19.2)	p>0.05
Hemoroid prevalence	Present	107	58 (35.2)	p=0.00
	Absent	698	133 (15.9)	p<0.05

Food intolerance has been shown to be one of the possible reasons for IBS (11). In our study we observed the IBS prevalence to be higher in individuals who did not eat regular meals and who had insufficient fiber in their diet. Also IBS prevalence increased as the daily consumption of cola increased, but we did not find any relation between IBS and daily consumption of tea and coffee or with alcohol intake.

Chronic laxative use usually exists in constipation-predominant patients (15). Change in bowel habitus was observed in 41.8% of our IBS (+) patients, with the most prevalent being constipation; laxative drug use was common among our patients.

Irritable bowel syndrome symptoms are increased during and after sensorial tension and stress periods (16). We found a significant correlation between IBS and psychological events prior to symptoms. In comparative studies using the type of the disease and psychological parameters, it was shown that diarrhea-predominant patients are more prone to depression than constipation-predominant subjects (17).

Appendectomized patients having normal appendix histology have been shown to have a high IBS prevalence (18). In our study we found a significant correlation between IBS and previous abdominal operation.

It has been demonstrated that the initial symptoms of IBS begin after a previous gastroenteritis history. We also found a positive correlation between IBS and previous infection history.

It is known that the prevalence of IBS-like symptoms is increased in gynecological patients and most of the IBS (+) women apply to a gynecologist

for pelvic pain (19). Attempts have been made to link overt symptoms during menstruation with increased visceral rectum sensibility, but it was demonstrated that rectum sensibility was not increased during that period (20). We also did not find significant correlation between symptoms and menstrual periods in IBS (+) women.

Our study was performed in a city center and 39.8% of the patients had applied to the doctor. Application rate of IBS patients to the doctor varies between 15-43% (8, 16). We found that a greater proportion of our patients (39.8%) had applied to the doctor.

We did not find any relation between weight loss and IBS in our study. As IBS is a functional disease, we did not expect this result but we investigated weight loss nonetheless in order not to exclude organic disease.

Hemorrhoid prevalence was significantly increased in IBS (+) patients in our study. Increased prevalence of IBS and hemorrhoid could be due to the occurrence of common factors playing a role in the etiology of hemorrhoids, which are dietary abnormalities (irregular daily nutrition, nutrition without fiber) and constipation in IBS (+) patients.

In conclusion, irritable bowel syndrome prevalence in our region with its demographic characteristics was similar to the results seen in western countries.

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