



Anismus as a cause of functional constipation – Experience from Serbia

Anizam kao uzrok funkcionalne opstipacije – iskustvo iz Srbije

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Abstract

Background/Aim. Anismus is paradoxical pressure increase or pressure decrease less than 20% of external anal sphincter during defecation straining. This study analyzed the presence of anismus as within a group of patients with the positive Rome III criteria for functional constipation. We used anorectal manometry as the determination method for anismus. **Methods.** We used anorectal water-perfused manometry in 60 patients with obstructive defecation defined by the Rome III criteria for functional constipation. We also analyzed anorectal function in 30 healthy subjects. **Results.** The presence of anismus is more frequent in the group of patients with obstructive defecation compared to the control group (a highly statistically significant difference, $p < 0.01$). Furthermore, we found that the Rome III criteria for functional constipation showed 90% accuracy in predicting obstructive defecation. We analyzed the correlation of anismus with the presence of weak external anal sphincter, rectal sensibility disorders, enlarged piles, diverticular disease and anatomic variations of colon. We found no correlation between them in any of these cases. **Conclusion.** There is a significant correlation between anismus and positive Rome III criteria for functional constipation. Anorectal manometry should be performed in all patients with the positive Rome III criteria for functional constipation.

Key words:

constipation; manometry; risk factors; serbia.

Apstrakt

Uvod/Cilj. Anizam predstavlja paradoksalno povećanje pritiska ili smanjenje pritiska ispod 20% u nivou spoljnog analnog sfinktera pri defekacionom napinjanju. U radu je analizirana zastupljenost anizma kao uzroka funkcionalne opstipacije u grupi bolesnika sa pozitivnim tzv. rimskim (Roma) III kriterijumima za funkcionalnu opstipaciju. Korišćena je anorektalna manometrija, te je na taj način analiziran i njen klinički značaj u dijagnostici anizma. **Metode.** Metoda anorektalne manometrije korišćena je kod 60 bolesnika koji su imali funkcionalnu opstipaciju definisanu pomenutim rimskim kriterijumima, kao i kod 30 zdravih osoba (kontrolna grupa). **Rezultati.** Zastupljenost anizma bila je visoko statistički značajnija u grupi bolesnika sa funkcionalnom opstipacijom u odnosu na kontrolnu grupu ($p < 0.01$). Ustanovljeno je da rimski III kriterijumi za funkcionalnu opstipaciju tačno predviđaju anizam kod 90% bolesnika. Analizirana je korelacija anizma sa insuficijencijom spoljnog analnog sfinktera, rektalnim senzibilitetom, uvećanim hemoroidalnim spletovima, divertikulama i anatomskim varijacijama kolona. Nije utvrđeno postojanje udruženosti anizma sa pomenutim entitetima. **Zaključak.** Postoji značajna korelacija anizma sa simptomima funkcionalne defekacije, tj. pozitivnim rimskim (Rome) III kriterijumima za funkcionalnu opstipaciju. Anorektalna manometrija trebalo bi da bude standardna metoda kod bolesnika sa funkcionalnom opstipacijom koji imaju pozitivne rimske (Rome) kriterijume za funkcionalnu opstipaciju.

Ključne reči:

opstipacija; manometrija; faktori rizika; srbija.

Introduction

Anismus is a paradoxical pressure increase or pressure decrease less than 20% of the external anal sphincter (EAS) during defecation straining¹⁻⁴. It is an acquired disorder that can occur in children as a new behavioral pattern in order to avoid discomfort

related to passage of large-volume stools or pain during defecation in patients with fissures or inflamed piles^{2,3,5}. It can also occur as a consequence of sexual or physical abuse^{2,6-8}.

The aim of the study was to establish the frequency and correlation of anismus as a cause of functional constipation when the positive Rome III criteria are present.

The Rome III criteria for functional constipation must include two or more of the following: straining during at least 25% of defecations; lumpy or hard stools in at least 25% of defecations; sensation of incomplete evacuation for at least 25% of defecations; sensation of anorectal obstruction/blockage for at least 25% of defecations; manual maneuvers to facilitate at least 25% of defecations (e.g., digital evacuation, support of the pelvic floor); fewer than three defecations *per* week; loose stools are rarely present without the use of laxatives; insufficient criteria for irritable bowel syndrome; (criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis) ^{1,3}.

Decreased rectal sensitivity and increased EAS pressure can cause obstructive defecation. In constipated patients we can find enlarged piles, diverticular disease, the ptotic or long colon ¹. Therefore, we also investigated the correlation of anismus with rectal sensibility disorders, EAS competence, enlarged piles, diverticular disease, ptotic or long colon.

Methods

We had 90 patients, 60 with symptoms of functional constipation (positive Rome III criteria for functional constipation) and 30 healthy subjects in the control group.

All the patients had normal endoscopic or large bowel enema study findings and no evidence for metabolic, inflammatory or neoplastic processes that can cause constipation.

We used water-perfused anorectal manometry procedure (Medtronic device). We followed standards for performing anorectal manometry ^{5,9,10}.

The data we received were analyzed by SPSS 16.0 software for Windows.

We used descriptive statistic methods, χ^2 -test and Fisher's test.

Values less than 0.05 were considered statistically significant.

Results

In the group of patients with functional constipation, anismus had 54 out of 60 (90%) patients which is highly statistically significant ($p < 0.01$) compared to the control group where we found anismus in 4 out of 30 (13.33%) patients (Table 1).

Table 1
The presence of anismus in the group of patients with the positive modified criteria for functional constipation and in the control group

Anismus	Group of patients	Control group	Total
Yes	54	6	60
No	6	24	30
Total	60	30	90

In the group of patients with anismus EAS insufficiency had 34 out of 54 (64.81%) patients. In the control group EAS insufficiency had 3 out of 6 (50%) patients with anismus, which was not statistically significant ($p > 0.05$).

In the group of patients with anismus, rectal sensibility disorders had 20 out of 54 (37%) patients. In the control group sensibility disorders had 1 out of 6 (16.66%) patients with anismus, which was not statistically significant.

Enlarged piles had 23 out of 54 (42.59%) patients with anismus, while 1 patient out of 6 (16.66%) patients with anismus in the control group had enlarged piles. No statistically significant difference was found.

Colonoptosis or dolichocolon had 20 out of 54 (37%) patients with anismus. In the control group 4 out of 6 patients with anismus had colonoptosis or dolichocolon or both. No statistically significant difference was found.

Diverticular disease had 10 out of 54 (54%) patients with anismus and none out of 6 (0%) patients with anismus in the control group. No statistically significant difference was found.

Discussion

Dyssinergic defecation significantly affects quality of life ^{8,9}. Therefore it is necessary to diagnose this problem in order to apply appropriate treatment strategy.

Anorectal manometry is a very important method for assessment of patients with constipation ¹⁰⁻¹⁹. We tested internal and external anal sphincter resting pressures, rectoanal inhibitory reflex (presence and adaptability) and rectal sensibility ^{5,10}.

According to the Mayo Clinic study (1,000 patients with constipation), 28% of the patients had defecatory disorders, i.e. anismus ²⁰. Another study that included 100 patients with the positive Rome II criteria for functional constipation showed that 46% of the patients had dyssinergic defecation i.e. anismus ²⁰. There are studies with up to 59% of patients with anismus ²¹⁻²³.

Our results showed that 90% of the patients with the positive Rome III criteria for functional constipation had anismus, which was highly statistically significant relative to the control group.

We did not find any correlation between anismus and rectal sensibility disorders, EAS insufficiency, diverticular disease, enlarged piles and dolichocolon or colonoptosis.

We did not find data about these correlations in published papers.

Conclusion

The results of our study show that 90% of all the patients with positive Rome III criteria for functional constipation had anismus diagnosed by anorectal manometry.

This high percentage suggests necessity to perform anorectal manometry in all patients with the positive Rome III criteria for functional constipation.

By using this approach we could make the early diagnosis of outlet obstruction (anismus) and apply appropriate treatment strategy like biofeedback (re-education) therapy which gives very good results.

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