Anismus as a cause of functional constipation – Experience from Serbia

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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.

Introduction

Anismus is a paradoxical pressure increase or pressure decrease less than 20% of the external anal sphincter (EAS) during defecation straining. 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. It can also occur as a consequence of sexual or physical abuse.

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.

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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, χ²-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>
<thead>
<tr>
<th>Anismus</th>
<th>Group of patients</th>
<th>Control group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>54</td>
<td>6</td>
<td>60</td>
</tr>
<tr>
<td>No</td>
<td>6</td>
<td>24</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>30</td>
<td>90</td>
</tr>
</tbody>
</table>

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 than 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-educat)on therapy which gives very good results.
REFERENCES


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