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Evaluation of Small Intestinal Bacterial Overgrowth in Patients with Functional Dyspepsia: A Case-control Study

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INTRODUCTION AND AIM

- Functional Dyspepsia (FD) is a disorder of gut-brain interaction characterized by chronic upper gastrointestinal symptoms without a structured explanation for those complaints
- Small intestinal bacterial overgrowth (SIBO) has been proposed as one mechanism that may contribute to symptoms in a subset of affected patients
- We aimed to assess the prevalence of SIBO among FD patients and compare it with healthy controls, and to identify potential predictors of SIBO in FD

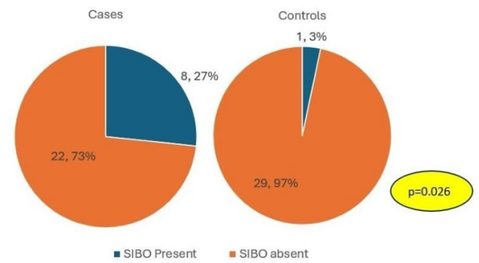
MATERIAL & METHODS

- Prospective case-control study
- 30 FD patients (ROME IV criteria), and 30 age and gender matched healthy controls were recruited
- SIBO assessed using glucose hydrogen breath test (GHBT)
- Clinical and laboratory variables analyzed
- Univariate and multivariate analysis performed

- SIBO is significantly more prevalent in functional dyspepsia (26.7% vs 3.3%), supporting a role of gut dysbiosis in its pathophysiology.
- Although symptoms such as bloating and belching are associated with SIBO, no independent predictors were identified.
- Objective testing—not symptom-based selection—should guide evaluation

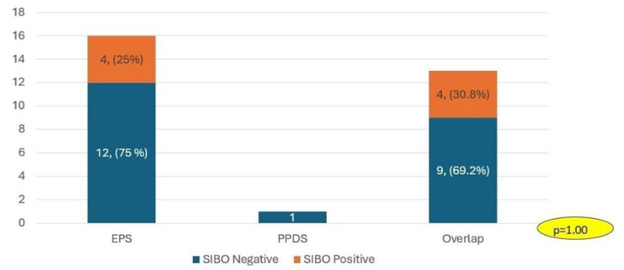
RESULTS

Figure 1



Prevalence of SIBO among cases compared to control group

Figure 2



Comparison of SIBO positivity among subtypes of functional dyspepsia

RESULTS

- The median age of FD patients was 39.5 years, with 53.3% males
- Most frequent FD subtype was epigastric pain syndrome (53.3%), followed by overlap subtype (43.3%), and postprandial distress syndrome (3.3%)
- SIBO was detected in 26.66% (8/30) of FD patients and 3.33% (1/30) in healthy controls (p=0.026).
- On univariate analysis among FD patients, symptoms of bloating (87.5%), flatulence (50%), belching (50%) and elevated basal hydrogen levels were significant predictors.
- Multivariate analysis did not reveal any independent predictor

CONCLUSION

- SIBO was significantly more prevalent in FD patients, suggesting a potential role of gut dysbiosis in the pathophysiology of FD.
- Although a few symptom-related variables tracked with SIBO on univariate testing, no independent clinical predictor was established.
- Larger, multicenter studies are required before symptom-based selection of FD patients for SIBO testing can be advised.

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