

Risk of Obesity, Diabetes, Insulin Resistance, and Dyslipidemia among Irritable Bowel Syndrome Patients

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Introduction

Obesity, diabetes, and dyslipidemia are components of metabolic syndrome; with a raising global prevalence, our study aimed to assess the susceptibility of IBS patients to these diseases.

Methods

PubMed, Scopus, Embase, and Web of Science were searched on the 1st of January 2023. Only observational controlled studies were included. Analysis was conducted by RevMan software version 5.4.

Inclusion criteria: Studies selected must be in the English language; controlled observational studies with data on the incidence of the obesity, diabetes, insulin resistance, and dyslipidemia among irritable bowel syndrome.

Exclusion criteria: Editorials, letters to the editor, commentaries, reviews, systematic reviews, meta-analysis, case reports, case series, and animal studies.

Results

IBS patients had a significantly higher prevalence of obesity (RR = 1.25, 95% CI = 1.01 to 1.55, p-value = 0.04) and increased BMI (MD = 1.51, 95% CI = 0.98 to 2.03, p-value <0.00001) compared to non-IBS patients. There wasn't significant association between IBS, increased blood glucose level (MD= 0.14, 95% CI = -1.23 to 1.52, p-value = 0.84), or diabetes (RR= 1.29, 95% CI = 0.85 to 1.98, p-value = 0.23), on the other hand, increased insulin resistance was seen among IBS patients (HOMA- IR MD = 0.21, 95% CI = 0.15 to 0.26, p-value <0.00001). Analysis of lipid profile showed that significantly higher levels of LDL (MD = 5.98, 95% CI = 0.91 to 11.05, p-value = 0.02), triglycerides (MD = 11.93, 95% CI = 11.55 to 12.31, p-value <0.00001), and total cholesterol (MD = 12.21, 95% CI = 6.23 to 18.18, p-value <0.0001) was observed among IBS patients. On the other hand, lower levels of HDL was significantly associated with IBS (MD = -1.80, 95% CI = -3.02 to -0.59, p-value =0.004).

Conclusion

IBS patients are at a higher risk of obesity, insulin resistance, and dyslipidemia. Consequently, patients should be regularly screened and early management should be initiated.

