Polycystic Ovary Syndrome and Irritable Bowel Syndrome: a Systematic Review and Meta-analysis

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Abstract

Statement of the Problem: Polycystic ovary syndrome (PCOS) is a common gynecological problem that is characterized by irregular menstrual periods, infertility, hirsutism, weight gain, and cystic ovaries. Recent studies have shown conflicting evidence regarding its association with irritable bowel syndrome (IBS), a gastrointestinal disorder which manifests as abnormal bowel movements, bloating, and abdominal pain. Thus, the aim of this study was to synthesize data from all available studies and construct a pooled odds ratio to determine the association of PCOS and IBS.

Methodology & Theoretical Orientation: We conducted a systematic review and meta-analysis by searching MEDLINE, Embase, Scopus, CINAHL, ClinicalTrials.gov, and Google Scholar, using the key terms "polycystic ovary syndrome" and "irritable bowel syndrome." Two reviewers (N.A, and P.R) independently screened the articles for eligibility. Extracted study data were synthesized by tabulation and forest plots were created using the random effects model with Review Manager 5.4.1. Study quality was assessed using QUADAS and publication bias was assessed using a funnel plot.

Findings: A total of 72 studies were screened, of which 8 studies from 6 different countries met eligibility criteria to be included in this review. Our pooled analysis included 37,212 patients. The pooled odds ratio for the association of PCOS and IBS was 2.77 (95% CI [1.26-6.08], p = 0.01). The proportion of PCOS patients with IBS was 7.49% (597/7968) whereas the controls with IBS was 0.99% (289/29,244). Visual inspection of the funnel plot suggests publication bias.

Conclusion & Significance: Patients with PCOS are approximately three times more likely to have IBS when compared with healthy controls. Thus, it may be prudent for physicians to screen IBS patients for PCOS.

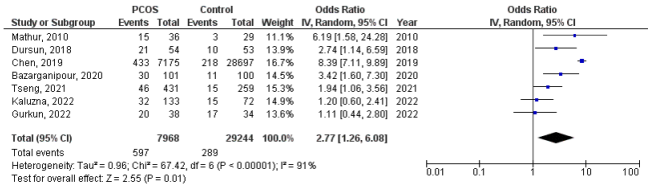


Figure 2. Forest plot showing the odds ratio of polycystic ovary syndrome and irritable bowel syndrome.

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