

Management of Chronic Prostatitis/ Chronic Pelvic Pain Syndrome

A Systematic Review and Network Meta-analysis

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Abstract

Background: Chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS) is common, but trial evidence is conflicting and therapeutic options are controversial. Our objective was to conduct a systematic review and network meta-analysis comparing mean symptom scores and treatment response among α -blockers, antibiotics, anti-inflammatory drugs, other active drugs (phytotherapy, glycosaminoglycans, finasteride, and neuromodulators), and placebo.

Method: We searched MEDLINE from 1949 and EMBASE from 1974 to November 16, 2010, using the PubMed and Ovid search engines. Randomized controlled trials comparing drug treatments in CP/CPPS patients. Two reviewers independently extracted mean symptom scores, quality-of-life measures, and response to treatment between treatment groups. Standardized mean difference and random-effects methods were applied for pooling continuous and dichotomous outcomes, respectively. A longitudinal mixed regression model was used for network meta-analysis to indirectly compare treatment effects.

Results: Twenty-three of 262 studies identified were eligible. Compared with placebo, α -blockers were associated with significant improvement in symptoms with standardized mean differences in total symptom, pain, voiding, and quality-of-life scores of -1.7 (95% confidence interval [CI], -2.8 to -0.6), -1.1 (95% CI, -1.8 to -0.3), -1.4 (95% CI, -2.3 to -0.5), and -1.0 (95% CI, -1.8 to -0.2), respectively. Patients receiving α -blockers or anti-inflammatory medications had a higher chance of favorable response compared with placebo, with pooled RRs of 1.6 (95% CI, 1.1-2.3) and 1.8 (95% CI, 1.2-2.6), respectively. Contour-enhanced funnel plots suggested the presence of publication bias for smaller studies of α -blocker therapies. The network meta-analysis suggested benefits of antibiotics in decreasing total symptom scores (-9.8; 95% CI, -15.1 to -4.6), pain scores (-4.4; 95% CI, -7.0 to -1.9), voiding scores (-2.8; 95% CI, -4.1 to -1.6), and quality-of-life scores (-1.9; 95% CI, -3.6 to -0.2) compared with placebo. Combining blockers and antibiotics yielded the greatest benefits compared with placebo, with corresponding decreases of -13.8 (95% CI, -17.5 to -10.2) for total symptom scores, -5.7 (95% CI, -7.8 to -3.6)

for pain scores, -3.7 (95% CI, -5.2 to -2.1) for voiding, and -2.8 (95% CI, -4.7 to -0.9) for quality-of-life scores.

Conclusion: Blockers, antibiotics, and combinations of these therapies appear to achieve the greatest improvement in clinical symptom scores compared with placebo. Anti-inflammatory therapies have a lesser, but measurable benefit on selected outcomes. However, beneficial effects of blockers may be overestimated because of publication bias.

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