POEMs

Patient-Oriented Evidence That Matters

PCI Is Better Than Placebo for Stable Angina in Patients Who Do Not Take Antianginal Medications

Clinical Question

Does percutaneous coronary intervention (PCI) reduce the symptoms of stable angina compared with a placebo procedure in patients who are not taking antianginal medications?

Bottom Line

In patients with stable angina who are not taking antianginal medications, PCI is effective. The study results suggest that for patients who are able to tolerate a maximal antianginal medical regimen, there is little or no benefit to PCI, but for those unable to adhere to medication, PCI provides an important benefit. (Level of Evidence = 1b)

Synopsis

The original ORBITA trial compared PCI with placebo in patients who were taking guideline-directed antianginal medications and found that there was no additional benefit with PCI for symptoms or treadmill exercise time. However, the authors acknowledge that achieving guideline-directed maximal medical therapy in the real world can be challenging. In this study, the authors identified patients with stable angina, severe stenosis of at least one vessel, and evidence of ischemia. They asked patients to stop taking any antianginal medications; antihypertensive medications with antianginal effects were replaced with alternate agents. Dual antiplatelet agents and statins were still prescribed. During a 2-week run-in period, the patients reported episodes of angina, and if they had at least one episode (n = 301) they were randomized to receive PCI or a placebo procedure involving sedation but no PCI. For the next 12 weeks, the patients reported anginal symptoms daily. At baseline, the patients' mean age was 64 years, 79% were male, 28% had diabetes mellitus, 80% had single-vessel disease, and most had moderate to severe angina (Canadian Cardiovascular Society class II or III). The median number of stents implanted was two in the PCI group. At 12 weeks, the mean daily number of angina episodes (0.3 vs. 0.7; odds ratio = 3.4; 95% CI, 2.0 to 5.9) and the angina symptoms score (2.9 vs. 5.6; $P < .001$) favored the PCI group. Masking was assessed to be effective.

Study design: Randomized controlled trial (double-blinded)

Funding source: Government

Allocation: Concealed

Setting: Outpatient (specialty)

Reference: *Rajkumar CA, Foley MJ, Ahmed-Jushuf F, et al.; ORBITA-2 Investigators. A placebo-controlled trial of percutaneous coronary intervention for stable angina.* N Engl J Med. *2023;389(25):2319-2330.*

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Single Intramuscular Dose of Nirsevimab Reduces Likelihood of Hospitalization Due to RSV in Average-Risk Infants During First Year of Life

Clinical Question

Does a single intramuscular injection of nirsevimab (Beyfortus) reduce the likelihood of hospitalization due to respiratory syncytial virus (RSV) in infants who do not meet criteria for receiving palivizumab?

Bottom Line

In average-risk infants, a single intramuscular dose of nirsevimab reduces the likelihood of hospitalization due to RSV. Although it is not inexpensive, nirsevimab is much less expensive than palivizumab and requires only a single dose. (Level of Evidence = 1b)

Synopsis

Nirsevimab is a monoclonal antibody against RSV that has recently been approved in the United States, Canada, and Europe. The study, which was conducted at 235 sites in France, Germany, and the United Kingdom, identified 8,058 infants born at 29 weeks' gestation or later who were not eligible for palivizumab. Palivizumab is recommended for children at high risk of RSV complications and requires a

monthly injection. The patients were recruited during their first winter and randomized to receive nirsevimab (50 mg if they weighed less than 5 kg [11 lb] and 100 mg if they weighed 5 kg or more) or usual care, in open-label fashion. The authors stated that most of the time the admitting physician was not an investigator, although they may have been told of the medication by the parents. The primary outcome was hospitalization for lower respiratory infection with a positive test result for RSV, which occurred in 11 infants in the nirsevimab group and 60 in the usual care group (0.3% vs. 1.5%; $P < .001$; number needed to treat = 83). Severe RSV infection also occurred less often in the nirsevimab group (0.12% vs. 0.47%; $P = .004$; number needed to treat = 286). All subgroups of age, weight, sex, gestational age, and timing of randomization had similar benefits. Serious adverse events were rare and similar between groups. According to the American Academy of Pediatrics, the cost of nirsevimab is approximately $495 for one dose.

Study design: Randomized controlled trial (nonblinded)

Funding source: Industry

Allocation: Concealed

Setting: Outpatient (any)

Reference: *Drysdale SB, Cathie K, Flamein F, et al.; HARMONIE Study Group. Nirsevimab for prevention of hospitalizations due to RSV in infants.* N Engl J Med. *2023;389(26):2425-2435.*

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Delivery of Bad News Via Telephone Is Equal to In-Person Delivery

Clinical Question

Does delivery of bad news via telephone increase psychological stress more than in-person communication?

Bottom Line

Delivering bad news by telephone does not affect levels of anxiety, depression, or satisfaction with care vs. delivering the news in person. (Level of Evidence = 2a)

Synopsis

The researchers searched four databases and reference lists of screened articles to identify 11 observational and randomized controlled trials that investigated differences in psychological distress of breaking bad news by telephone compared with delivering the news in person to patients or next of kin. Two authors independently selected articles for inclusion and abstracted the relevant data. Most of the studies (seven) evaluated disclosure of malignancy diagnoses; the remaining studies included results of genetic testing, Alzheimer disease, and hypertrophic cardiomyopathy. Overall, the study quality was moderate to good. There was no difference in psychological distress when bad news was delivered via telephone in terms of anxiety (three studies, 285 participants), depression (three studies, 284 participants), and posttraumatic stress disorder (two studies, 171 participants). Results were similar for satisfaction with care. In a single study, there was no association between level of trust, which was high, and disclosure of bad news via telephone vs. in person.

Study design: Meta-analysis (other)

Funding source: Government

Setting: Various (meta-analysis)

Reference: *Mueller J, Beck K, Loretz N, et al. The disclosure of bad news over the phone vs. in person and its association with psychological distress: a systematic review and meta-analysis.* J Gen Intern Med. *2023;38(16):3589-3603.*

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Monoclonal Antibodies for Alzheimer Disease: a Lack of Clinically Meaningful Benefits, Plus Significant Harms

Clinical Question

Does treatment with monoclonal antibody therapy that targets amyloid improve patient outcomes?

Bottom Line

Amyloid-targeting antibodies for the treatment of Alzheimer disease have failed to demonstrate clinically meaningful benefits. They are associated with concerning risks of harm, most notably cerebral hemorrhage identified on imaging studies (number needed to harm [NNH] = 13). The balance of risk vs. benefit demonstrated so far does not justify the use of these costly drugs (more than $20,000 annually). (Level of Evidence = 1a)

Synopsis

The authors of the systematic review and meta-analysis of randomized controlled trials sought to determine whether monoclonal antibody medications that target amyloid for the treatment of Alzheimer disease provide clinically meaningful, patient-oriented benefits or harms. This is an important question because federal approval of these medications was based on surrogate markers. The authors included 19 studies with 23,202 participants. Inclusion criteria involved the enrollment of adults with cognitive impairment, Alzheimer disease of any severity, or a high risk of Alzheimer disease, and the reporting of an outcome of interest. The authors

excluded trials or trial arms that used doses lower than those approved by the U.S. Food and Drug Administration. All studies were industry-funded placebo-controlled trials. Most studies enrolled patients with mild cognitive impairment or mild to moderate Alzheimer disease. Outcomes of interest were well-defined minimum clinically important differences in the results for any of the multiple cognitive scoring tools and potential harms. The drugs used in the trials included in the meta-analysis were solanezumab, aducanumab (Aduhelm), lecanemab (Leqembi), donanemab, and bapineuzumab. Notably, there are no head-to-head trials with other drugs. The summary analysis showed that improvement vs. placebo was small (standardized mean difference = −0.07; 95% CI, −0.10 to 0.04). Although some statistically significant benefits were identified, none were close to reaching a minimum clinically important difference threshold. There was no overall difference between treatment and control groups for all-cause mortality, although bapineuzumab was associated with an increase (relative risk [RR] = 1.76; 95% CI, 1.03 to 3.00; NNH = 102). The harms that were reported most often were amyloid-related imaging abnormalities (ARIA) edema (RR in overall analysis = 10.3; 95% CI, 7.4 to 14.3; NNH = 9), symptomatic ARIA-edema (RR for the three drugs reporting = 24.3; 95% CI, 9.9 to 59.9; NNH = 86), and ARIA-hemorrhage (RR = 1.74; 95% CI, 1.2 to 2.4; NNH = 13).

Study design: Meta-analysis (randomized controlled trials)

Funding source: Unknown/not stated

Setting: Various (meta-analysis)

Reference: *Ebell MH, Barry HC, Baduni K, et al. Clinically important benefits and harms of monoclonal antibodies targeting amyloid for the treatment of Alzheimer disease: a systematic review and meta-analysis.* Ann Fam Med. *2024;22(1):50-62.*

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