POEMs

Patient-Oriented Evidence That Matters

Screening for Atrial Fibrillation in Primary Care Is Not Effective

Clinical Question

Does screening for atrial fibrillation (AF) in people 65 years and older in the primary care setting improve patient outcomes?

Bottom Line

The U.S. Preventive Services Task Force assigned a grade of I for insufficient evidence for screening for AF (a summary is available at https://www.aafp.org/pubs/afp/issues/2022/0600/od1.html). This study was a large, adequately powered trial and an important addition to the evidence base. It found no benefit in screening for AF. An increased rate of diagnosis in the oldest patients was found, but this is hypothesis-generating only and requires confirmation. The balance of benefits and harms of anticoagulants for patients 85 years and older is less favorable than for younger patients because of competing causes of mortality (i.e., dying of something else before having a stroke). (Level of Evidence = 1b–)

Synopsis

This study, sponsored by the manufacturers of the direct oral anticoagulant apixaban, randomized 16 primary care clinics to provide screening for AF using a single-lead handheld electrocardiograph or usual care. Comparable clinics were paired, and one clinic from each pair was randomly selected to be in the screening group to increase the comparability of the overall groups; the two groups were similar in demographics, vital signs, and comorbidities. The primary analysis was by intention to treat. The screening practices group included 15,393 people, and the usual care practices group comprised 15,322 people. Patients 65 years and older in the screening group were offered screening at each clinic visit; 72% underwent screening. After one year, there was no difference between groups in the primary outcome of newly diagnosed AF (1.72% screened, 1.59% unscreened; risk difference = 0.13%; 95% CI, –0.16% to 0.42%). Per-protocol and as-treated analyses came to the same conclusion. There was no difference between groups in the likelihood that a patient received a new prescription for an anticoagulant. The authors analyzed post hoc data and found that among patients 85 years and older, there was a significantly greater likelihood of being diagnosed with AF in the screened group (5.6% vs. 3.8%; risk difference = 1.8%; 95% CI, 0.18% to 3.3%).

Study design: Randomized controlled trial (nonblinded)

Funding source: Industry

Allocation: Uncertain

Setting: Outpatient (primary care)

Reference: *Lubitz SA, Atlas SJ, Ashburner JM, et al. Screening for atrial fibrillation in older adults at primary care visits: VITAL-AF randomized controlled trial.* Circulation. *2022;145(13):946-954.*

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This series is coordinated by Natasha Pyzocha, DO, contributing editor.

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Pharmacogenomic Testing for Selection of Antidepressant Provides Minimal, If Any, Benefit

Clinical Question

Is pharmacogenomic-guided antidepressant treatment beneficial in the management of major depressive disorder in adults?

Bottom Line

Pharmacogenomic testing for drug-gene interactions in adults with major depressive disorder resulted in reduced prescribing of medications with potential drug-gene interactions. However,

no significant difference occurred in symptom remission rates in the gene-tested group compared with the usual care group at six months. (Level of Evidence = 1b)

Synopsis

The benefit of pharmacogenomic-guided selection of antidepressant therapy remains uncertain based on low-quality evidence. The investigators identified adults, 18 to 80 years of age, who met standard diagnostic criteria for major depressive disorder, had a history of at least one treatment episode, and were planning to switch treatments or start a new treatment episode. All patients (N = 1,944) underwent DNA collection and were randomly assigned (concealed allocation) to a group whose clinicians received the pharmacogenomic test results within three business days or a group whose clinicians had to wait 24 weeks for results. Clinicians in the pharmacogenomic-guided group initiated treatment based on the results; the clinicians in the delayed-results group initiated treatment as usual. Individuals masked to treatment group assignment assessed the treatment results using standard scoring tools at four, eight, 12, 18, and 24 weeks. Complete follow-up occurred for 79% of patients at 24 months.

Using intention-to-treat analysis, the pharmacogenomic-guided group was significantly more likely to receive treatment with an antidepressant with no potential drug-gene interaction. Remission rates were significantly increased in the pharmacogenomic-guided group at eight and 12 weeks, but not at four, 18, or 24 weeks. The authors note that there were multiple comparisons made without statistical corrections, so results beyond the primary outcomes of drug choice and remission at 24 weeks are subject to interpretation.

Study design: Randomized controlled trial (single-blinded)

Funding source: Industry and foundation

Allocation: Concealed

Setting: Outpatient (any)

Reference: *Oslin DW, Lynch KG, Shih MC, et al. Effect of pharmacogenomic testing for drug-gene interactions on medication selection and remission of symptoms in major depressive disorder: the PRIME care randomized clinical trial.* JAMA. *2022;328(2):151-161.*

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Similar Functional Outcomes After Treating Minimally Displaced or Nondisplaced Scaphoid Waist Fractures With Surgery or Immobilization

Clinical Question

Do adults with nondisplaced or minimally displaced scaphoid waist fractures have better functional outcomes after one year if they are treated surgically or nonsurgically?

Bottom Line

The research on the optimal management of nondisplaced or minimally displaced scaphoid waist fractures is sparse and of mixed quality. The nearly identical trade-off of benefits and complications presents an opportunity for shared decision-making until quality studies become available. (Level of Evidence = 1a–)

Synopsis

The authors report that the use of urgent surgery for adults with scaphoid waist fractures is increasing despite uncertain evidence. They analyzed the evidence by searching several databases, registries, and reference lists of included studies to identify randomized trials that compared surgery with nonoperative management in adults (i.e., older than 16 years) with scaphoid waist fractures that are displaced no more than 2 mm. The analysis focused primarily on functional outcomes after 12 months of intervention. The authors included seven trials that enrolled 25 to 439 participants who were an average of 30 years of age (i.e., ages ranged from 15 to 75 years), 83% were men, and 98% had scaphoid waist fractures. Three of the studies were rated as high quality and four were rated as low quality. Four of the studies assessed function at six and 12 months, and although the authors identified marked heterogeneity among the results, there was no difference at these time points on average. However, five studies reported nonunion rates at early follow-up (not defined by the authors); nonunion occurred in 1% of the surgically treated participants compared with 7.8% of the nonsurgically treated participants (number needed to treat = 15; 95% CI, 10 to 29). Four trials reported complications, and one reported that no complications occurred in either group. Nerve injuries, infections, or complex regional pain syndromes occurred in 9%

of surgically treated participants and in 2.6% of those treated nonsurgically (number needed to harm = 16). The benefits and complications are nearly identical.

Study design: Meta-analysis (randomized controlled trials)

Funding source: Government

Setting: Various (meta-analysis)

Reference: *Johnson NA, Fairhurst C, Brealey SD, et al. One-year outcome of surgery compared with immobilization in a cast for adults with an undisplaced or minimally displaced scaphoid fracture: a meta-analysis of randomized controlled trials.* Bone Joint J. *2022;104-B(8):953-962.*

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Tirzepatide Helps Adults With Obesity Without Diabetes Lose 15% to 21% of Their Body Weight Over 72 Weeks

Clinical Question

Does tirzepatide (Mounjaro) safely help patients lose more weight than placebo?

Bottom Line

In patients with obesity without diabetes mellitus, those taking tirzepatide lost 15% to 21% of their body weight (compared with 3% for those taking placebo) over a 72-week period. The lowest cost on goodrx.com was $967 per month for four 10-mg cartridges for injection. (Level of Evidence = 1b)

Synopsis

Tirzepatide is a glucagon-like peptide-1 receptor agonist developed to treat type 2 diabetes. The study identified adults with a body mass index greater than 30.0 kg per m^2 or greater than 27.0 kg per m^2 with at least one weight-related complication, such as hypertension, sleep apnea, cardiovascular disease, or dyslipidemia. Patients with diabetes were excluded. The mean age of the 2,539 patients was 45 years, 67% were women, and 60% had a body mass index greater than 35.0 kg per m^2. Allocation concealment was not described, but groups were balanced at the start of the study. The patients were randomized to receive 5, 10, or 15 mg of tirzepatide or matching placebo injection once weekly. Approximately 86% of participants completed the 72-week study. The reduction in weight was 15% in the 5-mg group, 19.5% in the 10-mg group, 20.9% in the 15-mg group, and 3.1% in the placebo group. Reductions also occurred in metabolic markers, such as systolic blood pressure (6.2 mm Hg) and low-density lipoprotein cholesterol (4.2 mg per dL [0.15 mmol per L]), in the tirzepatide groups. Serious adverse events were rare and evenly distributed among groups. Discontinuation due to adverse events was 2.6% in the placebo group and 4.3% to 7.1% in the tirzepatide groups.

Study design: Randomized controlled trial (double-blinded)

Funding source: Industry

Allocation: Uncertain

Setting: Outpatient (any)

Reference: *Jastreboff AM, Aronne LJ, Ahmad NN, et al.; SURMOUNT-1 Investigators. Tirzepatide once weekly for the treatment of obesity.* N Engl J Med. *2022;387(3):205-216.*

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