POEMs

Patient-Oriented Evidence That Matters

Autism Screening with Follow-Up Overidentifies Autism Spectrum Disorder

Clinical Question

What is the accuracy of a two-step process for universal screening for autism spectrum disorder (ASD) in children ages 16 months to 26 months?

Bottom Line

Screening for ASD with the Modified Checklist for Autism in Toddlers with Follow-Up is effective in ruling out ASD in children who screen positive (negative predictive value of 98.6% at 2.2% prevalence). The initial screening identified approximately 10% of toddlers as possibly having ASD, although 94.8% of those children were excluded in the follow-up interview. The positive predictive value was only 14.6%, meaning that 85% of the children who screened positive for ASD were falsely positive. Although some groups recommend universal screening, the U.S. Preventive Services Task Force cites a lack of evidence to support the benefit of early identification. (Level of Evidence = 1b)

Synopsis

This study evaluated the effect of universal screening for autism in primary care at a single hospital using the Modified Checklist for Autism in Toddlers with Follow-Up. Over 4.5 years, they screened 25,999 children between the ages of 16 months and 26 months. At the first screening, almost one in 10 children screened positive (9.1%). However, in the follow-up interview almost all of those children (94.8%) were no longer considered to have ASD, and the final prevalence in the group was 2.2% by four years of age. The resulting positive predictive value was only 14.6%, with a negative predictive value of 98.6% (sensitivity of 38.8%; specificity of 94.9%). In other words, 85% of parents who have a child who initially screens positive will later be told the result was incorrect. The positive predictive value for girls was even lower (7.7%). For children correctly screened as positive, the time to diagnosis was an average of 7.45 months earlier than those who screened negative. Whether this benefit results in faster access to treatment with better results is not known.

Study design: Cohort (prospective)

Funding source: Foundation

Setting: Outpatient (primary care)

Reference: *Guthrie W, Wallis K, Bennett A, et al. Accuracy of autism screening in a large pediatric network.* Pediatrics. *2019;144(4):pii:e20183963.*

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Surgery or Lasers Preferred to Foam Sclerotherapy for Varicose Veins

Clinical Question

What is the best approach to treat varicose veins?

Bottom Line

For symptomatic varicose veins at least 3 mm in diameter with evidence of saphenous vein reflux, laser ablation is the preferred initial therapy. (Level of Evidence = 1b)

Synopsis

The researchers identified 798 adults with primary symptomatic varicose veins at least 3 mm in diameter in at least one leg, plus evidence of reflux of the saphenous veins by more than one second by duplex ultrasonography. Patients with deep or superficial thrombosis were excluded. If both legs were involved, the most severely affected leg was evaluated in the study. Participants were

randomized to one of three treatment options: foam sclerotherapy, laser ablation (followed by foam sclerotherapy if needed), and surgery. Of 11 centers, three offered foam sclerotherapy or surgery leading to an imbalance in the number in each group, with only 212 in the laser ablation group compared with 292 to 294 in the other groups. Follow-up with the primary outcome questionnaire was 87% to 92% at six weeks, 82% to 88% at six months, and 73% to 76% at five years. There were more early withdrawals in the surgery group. Data from case notes were available for 96% of patients. Groups were balanced, with a mean age of 49 years, 57% women, and about three-fourths having involvement in only one leg. Analysis was by intention-to-treat. After five years, the Aberdeen Varicose Vein Questionnaire score had decreased more in the laser ablation and surgery groups than in the foam sclerotherapy group. The effect sizes were clinically and statistically significant. A cost-effectiveness analysis favored laser ablation over the other two approaches.

Study design: Randomized controlled trial (nonblinded)

Funding source: Government

Allocation: Concealed

Setting: Outpatient (any)

Reference: *Brittenden J, Cooper D, Dimitrova M, et al. Five-year outcomes of a randomized trial of treatments for varicose veins.* N Engl J Med. *2019;381(10):912-922.*

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Equivalent Pain Relief with Different Doses of Ibuprofen

Clinical Question

In patients with acute pain, does a higher dose of ibuprofen produce greater pain relief?

Bottom Line

Higher doses of ibuprofen for acute pain relief offer no more benefit at 60 minutes than a single 400-mg dose. The same has been shown for chronic treatment of osteoarthritis. A higher, anti-inflammatory dose is not needed. Another study showed equivalence between 200-mg and 400-mg doses of ibuprofen. (Level of Evidence = 2b)

Synopsis

The authors enrolled 225 adults who presented to a single emergency department with an acute painful condition (approximately 75% had musculoskeletal pain). The average pain score was between 6 and 7 on a scale of 1 to 10, with higher scores indicating higher pain. Using concealed allocation, patients were randomly assigned to receive a single dose of ibuprofen, 400 mg, 600 mg, or 800 mg. Using intention-to-treat analysis, pain scores after 60 minutes dropped to between 4.36 and 4.50 in all three groups. The study had 80% power to find a difference of at least 1.3 points among the groups.

Study design: Randomized controlled trial (double-blinded)

Funding source: Foundation

Allocation: Concealed

Setting: Emergency department

Reference: *Motov S, Masoudi A, Drapkin J, et al. Comparison of oral ibuprofen at three single-dose regimens for treating acute pain in the emergency department: a randomized controlled trial.* Ann Emerg Med. *2019;74(4):530-537.*

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Nonpharmacologic Approaches Are Better Than Medication to Control Aggression and Agitation in Dementia

Clinical Question

What is the best approach to agitated patients with dementia?

Bottom Line

Nonpharmacologic approaches to agitation or aggression in patients with dementia are more effective than medication (e.g., haloperidol). Outdoor activities, multidisciplinary care, and massage and touch therapy with or without music are all effective. (Level of Evidence = 1a)

Synopsis

The authors searched five databases, including Cochrane CENTRAL and bibliographies of retrieved studies, identifying 163 randomized controlled studies of 23,143 patients that compared interventions for treating aggression and agitation in adults with dementia. Two investigators independently selected, abstracted, and

evaluated the studies. Almost one-half of the studies were categorized as being at high risk of bias, mostly because of missing outcome data. Because not every intervention is directly compared with one another, the authors performed a network analysis, which allows indirect comparisons based on a common comparator. Typical antipsychotics provided no additional benefit compared with modifying instrumental activities of daily living (which is not more effective than usual care). Cannabinoids and dextromethorphan/quinidine (Nuedexta) were moderately more effective than instrumental activity of daily living modification. Outdoor activity, multidisciplinary care, and massage and touch therapy, with or without music, were effective in producing a large reduction in aggression and agitation.

Study design: Systematic review

Funding source: Government

Setting: Various (meta-analysis)

Reference: *Watt JA, Goodarzi Z, Veroniki AA, et al. Comparative efficacy of interventions for aggressive and agitated behaviors in dementia: a systematic review and network meta-analysis.* Ann Intern Med. *2019;171(9):633-642.*

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