POEMs

USPSTF Recommendations for Hepatitis B Screening

Clinical Question

Who should be screened for hepatitis B virus infection?

Bottom Line

The U.S. Preventive Services Task Force (USPSTF) recommends hepatitis B virus screening for human immunodeficiency virus–positive persons, users of illicit injection drugs, men who have sex with men, household contacts or sex partners of infected persons, and persons born in countries with a high prevalence of hepatitis B virus infection or who are born to parents who were born in regions with very high prevalence of hepatitis B virus infection. This is a B recommendation (moderate certainty of moderate benefit) and is an update of the 2004 recommendation, which recommended against screening the general population. In another statement, the USPSTF also recommends screening pregnant women. (Level of Evidence = 5)

Synopsis

Although there is no direct evidence from randomized controlled trials, the USPSTF concludes the associated harm from screening is low. Early detection can result in early antiviral treatment that can prevent cirrhosis, hepatic failure, and liver cancer. The hepatitis B surface antigen (HBsAg) has a sensitivity and specificity of greater than 98%, and can detect acute and chronic infection. Chronic hepatitis B virus infection is diagnosed with a positive HBsAg for at least six months. This guideline included a high-quality literature review and the committee included a methodologist, stakeholders, and a patient representative. The guideline focused on patient-oriented outcomes, and was written by committee members without intellectual, professional, or financial conflicts of interest.

Study design: Practice guideline

Funding source: Government

Setting: Various (guideline)

References: *LeFevre ML. Screening for hepatitis B virus infection in nonpregnant adolescents and adults: U.S. Preventive Services Task Force recommendation statement.* Ann Intern Med. *2014;161(1):58-66.*

Chou R, Dana T, Bougatsos C, Blazina I, Khangura J, Zakher B. Screening for hepatitis B virus infection in adolescents and adults: a systematic review to update the U.S. Preventive Services Task Force recommendation. Ann Intern Med. *2014;161(1):31-45.*

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Epidural Steroid Injections Ineffective for Lumbar Spinal Stenosis

Clinical Question

Do epidural glucocorticoid injections improve the symptoms of spinal stenosis?

Bottom Line

Epidural glucocorticoid injections are ineffective for lumbar spinal stenosis. Whether this will change practice for this lucrative procedure will be an interesting question. (Level of Evidence = 1b)

Synopsis

Epidural glucocorticoid injections are a common treatment for patients with lumbar spinal stenosis, but their effectiveness is uncertain. In this study, the researchers identified 400 patients, 50 years and older, with lumbar spinal stenosis (confirmed by magnetic resonance imaging or computed tomography); pain of at least 4 on a scale from 1 to 10 in the buttock or leg; and significant functional disability based on a validated scale. Patients were randomly assigned to receive an epidural injection with lidocaine and a glucocorticoid (betamethasone, 6 to 12 mg; dexamethasone, 8 to 10 mg; or triamcinolone,

60 to 120 mg), or lidocaine alone. All injections were done under fluoroscopic guidance.

Groups were balanced at the start of the study, with the exception of a somewhat shorter duration of pain in the lidocaine-only group, and analysis was by intention to treat. The mean age of participants was 68 years, 55% were women, and 69% were white. Patients could receive a second injection three weeks after the first, and results were evaluated three and six weeks after the initial injection. At three weeks, improvements in pain and disability were slightly greater in the intervention group, but these were not clinically significant, and they disappeared by the six-week assessment. Adverse events were more common in the intervention group.

Study design: Randomized controlled trial (double-blinded)

Funding source: Government

Allocation: Concealed

Setting: Outpatient (specialty)

Reference: *Friedly JL, Comstock BA, Turner JA, et al. A randomized trial of epidural gluocorticoid injections for spinal stenosis [published correction appears in* N Engl J Med. *2014;371(4):390].* N Engl J Med. *2014;371(1):11-21.*

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High-Dose Vaccine Reduces Clinical Influenza in Older Adults Compared with Standard Dose

Clinical Question

Among older adults, does high-dose influenza vaccine improve protection against influenza compared with the standard-dose version?

Bottom Line

High-dose influenza vaccine provided a 25% relative reduction in the likelihood of developing laboratory-confirmed influenza compared with standard-dose vaccine in patients 65 years and older. This corresponds to a number needed to treat of approximately 220 to prevent a laboratory-confirmed case of influenza, which must be balanced against a slightly higher risk of very rare serious adverse events and higher cost. (Level of Evidence = 1b)

Synopsis

The researchers randomized 31,989 adults, 65 years or older, without acute illness, to receive the standard-dose or a high-dose influenza vaccine over the course of two sequential influenza seasons. The standard dose contained 15 mcg of hemagglutinin per strain, whereas the high-dose version contained 60 mcg. The groups were balanced at baseline. The primary end point was the occurrence of laboratory-confirmed influenza in conjunction with influenza-like illness at least 14 days after vaccination. Patients were instructed to call their study site with any respiratory symptoms, including sneezing, sore throat, cough, rhinorrhea, or difficulty breathing. These symptoms triggered nasopharyngeal swab testing within five days of symptom onset.

In the intention-to-treat analysis, 3,745 high-dose vaccine recipients reported respiratory symptoms prompting symptom review and laboratory testing, whereas 3,827 standard-dose participants experienced the same. Laboratory-confirmed influenza was less likely in those receiving high-dose vaccine (228 vs. 301 [1.4% vs. 1.9%]; relative risk reduction = 24%; 95% confidence interval, 9.7% to 36.5%). The absolute risk reduction was 73 cases, for a number needed to treat of approximately 220. Three high-dose patients had serious adverse events deemed vaccine-related compared with zero standard-dose recipients. However, overall serious adverse events were lower in the high-dose group (relative risk = 0.92; 95% confidence interval, 0.85 to 0.99). The authors caution against extrapolating these results to older adults with moderate or severe acute illnesses because that population was not included in the study. These results may also differ depending on the match of vaccine to the circulating strains of influenza.

Study design: Randomized controlled trial (double-blinded)

Funding source: Industry

Allocation: Concealed

Setting: Population-based

Reference: *DiazGranados CA, Dunning AJ, Kimmel M, et al. Efficacy of high-dose versus standard-dose influenza vaccine in older adults.* N Engl J Med. *2014;371(7):635-645.*

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Desmopressin Effective for Treating Nocturia in Adults

Clinical Question

Is desmopressin safe and effective in treating adults with nocturia?

Bottom Line

Desmopressin is a safe and effective treatment to offer adults with clinically significant nocturia. The initial starting dose should be 50 to 100 mcg, with lower dosing

for the advanced older patient. All patients should be monitored for hyponatremia. (Level of Evidence = 1a)

Synopsis

These investigators searched PubMed and reference lists of included studies, as well as a previous systematic review, for randomized clinical trials that compared desmopressin with placebo in adults with nocturia. Two reviewers independently assessed potential publications for inclusion and methodologic quality, and differences were resolved after a consensus discussion with a third reviewer. Quality was assessed using the standard Cochrane Collaboration bias risk guidelines. Ten articles (N = 2,191) met inclusion criteria, including four studies that used an active run-in period after which patients who experienced adverse events or did not respond to the study drug were excluded. As a result, these four studies were considered at high risk of bias, whereas the remaining six were all assessed as high quality. Outcomes were stratified by dose (less than 100 mcg vs. 100 mcg or greater).

Overall, patients receiving desmopressin experienced a significant decrease in the number of nocturnal voids compared with those taking placebo (0.5 fewer voids; 95% confidence interval, 0.35 to 0.65). The benefit was greater for doses of 100 mcg or higher than for lower doses (0.77 fewer voids vs. 0.3 fewer voids, respectively). The overall results were also homogeneous in the high-dose subgroup. In addition, patients receiving desmopressin experienced significantly increased sleep time compared with control patients (mean = 58 more minutes; 95% confidence interval, 39 to 76). Headaches and hyponatremia were the most commonly reported adverse effects; complications and severe adverse events were rare. There were no differences in results based on sex.

Study design: Meta-analysis (randomized controlled trials)

Funding source: Self-funded or unfunded

Setting: Various (meta-analysis)

Reference: *Ebell MH, Radke T, Gardner J. A systematic review of the efficacy and safety of desmopressin for nocturia in adults.* J Urol. *2014;192(3):829-835.*

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