POEMs®
PATIENT ORIENTED EVIDENCE THAT MATTERS®
Practice Recommendations from Key Studies

Statins prevent strokes in high-risk patients

Collins R, Armitage J, Parish S, et al. Effects of cholesterol-lowering with simvastatin on stroke and other major vascular events in 20,536 people with cerebrovascular disease or other high-risk conditions. Lancet 2004; 363:757–767.

CLINICAL QUESTION

Does lipid lowering with statins prevent stroke?

BOTTOM LINE

In a select group of compliant, high-risk patients, simvastatin (Zocor) slightly reduced the rate of stroke, except in those patients with known cerebrovascular disease. We would need to treat 72 patients for 4.3 years to prevent 1 stroke. (LOE=**1b**)

STUDY DESIGN

Randomized controlled trial (double-blinded)

SETTING

Outpatient (any)

SYNOPSIS

This report is part of the Heart Protection Study that studied men and women aged 40 to 80 years, who had random total cholesterol levels of at least 3.5 mmol/L (135 mg/dL) and at least 1 of the following: cerebrovascular disease or coronary disease, other occlusive arterial disease, diabetes mellitus, or hypertension. All patients completed a run-in phase of simvastatin 40 mg daily. The researchers then excluded noncompliant patients and those unable to tolerate the medication.

The patients who remained were randomized to simvastatin 40 mg daily or placebo. The researchers don't state if the allocation process was masked. The outcomes were assessed by staff members unaware of group assignment or cholesterol concentrations.

The patients were seen at 4, 8, and 12 months, and then every 6 months for an average of 4.3 years. The main outcomes, assessed by intention to treat, included total stroke, ischemic stroke, and cerebral hemorrhage. The study included 3280 patients with cerebrovascular disease and 17,256 without.

Overall, the rate of stroke was slightly lower in the simvastatin group (4.3%) than in the placebo group (5.7%). One would need to treat 72 high-risk patients for 4.3 years to prevent 1 stroke. Among patients with prior cerebrovascular disease, the rate of stroke was similar (10%) in each group.

What is a POEM?

Each month, the POEMs (Patient-Oriented Evidence that Matters) editorial team reviews 105 research journals in many specialties, and selects and evaluates studies that investigate important primary care problems, measure meaningful outcomes, and have the potential to change the way medicine is practiced. Each POEM offers a Bottom Line observation and summarizes the study's objective, patient population, study design and validity, and results. InfoPOEMs, InfoRetriever and POEMS for Primary Care are registered trademarks of InfoPOEM, Inc. POEMS and Patient-Oriented Evidence that Matters are trademarks of InfoPOEM, Inc. These POEMs are copyrighted by, and published with the express permission of InfoPOEM, Inc. and may not be copied or otherwise reproduced without the prior written consent of InfoPOEM, Inc.

Antibiotics ineffective for prevention of recurrent MI

Etminan M, Carleton B, Delaney JAC, Padwal R. Macrolide therapy for Chlamydia pneumoniae in the secondary prevention of coronary artery disease: a meta-analysis of randomized controlled trials. Pharmacotherapy 2004; 24:338–343.

CLINICAL QUESTION

For patients who have experienced a myocardial infarction, is antibiotic therapy aimed at eradicating *Chlamydia pneumoniae* effective at preventing a second coronary event?

BOTTOM LINE

Antibiotic therapy with a macrolide, aimed at eradicating *C pneumoniae,* was ineffective at reducing recurrence of a coronary event or decreasing mortality in patients who had experienced either a myocardial infarction or acute coronary syndrome. The door is closing on this intriguing hypothesis. (LOE=**1a**)

STUDY DESIGN

Meta-analysis (randomized controlled trials)

SETTING

Outpatient (any)

SYNOPSIS

A bacterial cause of coronary heart disease is an attractive hypothesis, since we have treatments that should be able to eliminate bacterial infection. The authors of this meta-analysis searched several databases to find English-language randomized controlled trials of antibiotic therapy directed against *C pneumoniae* that evaluated a clinical outcome. They found 9 studies that met their criteria, enrolling a total of more than 12,000 patients.

All studies used a macrolide antibiotic as the main intervention, with 1 using a triple therapy of azithromycin (Zithromax), metronidazole (Flagyl), and omeprazole (Prilosec) to also eradicate *Helicobacter pylori*. All patients had either acute coronary syndrome or coronary heart disease and were not selected based on the presence of high *C pneumoniae* titers. Treatment ranged in duration from 3 days to 3 months.

Overall, antibiotic treatment did not reduce the risk of any coronary event, myocardial infarction, angina, or mortality. However, the investigators may have mixed apples and oranges. They combined studies using a wide range of antibiotic doses, from azithromycin for a total of 5 days to once-weekly azithromycin for 3 months to clarithromycin (Biaxin) or roxithromycin daily for 28 to 90 days. It's possible that higher doses or longer durations could produce a clinically relevant effect.

Disclosure of errors preferred by patients

Mazor KM, Simon SR, Yood RA, et al. Health plan members' views about disclosure of medical errors. Ann Intern Med 2004; 140:409–418.

CLINICAL QUESTION

How do patients report they will respond when doctors disclose errors?

BOTTOM LINE

Given a hypothetical situation in which harm occurred as the result of a medical error, patients overwhelmingly report that they would want to be told of the error. Full disclosure increases patient satisfaction, trust, and positive emotional responses.

Although this disclosure may make them feel better, it may not decrease their desire to sue. Most patients (83%) would want financial compensation for an injury that occurs because an error, and 13% expressed a desire for compensation even if harm didn't occur. A questionnaire of this type does not evaluate the role of bedside manner during the process of disclosure. (LOE=**2c**)

STUDY DESIGN
Cross-sectional

SETTING
Population-based

SYNOPSIS

This study used a self-administered questionnaire to gauge patients' responses to several types of errors and their disclosure by physicians. The questionnaires were sent to a sample of 1500 patients of a New England–based health maintenance organization (the response rate was 66%, which is high for this type of study, but less than the 70% often cited as being satisfactory). Eight versions of the questionnaire were used, which varied by type of error, clinical outcome of the error, and level of physician disclosure.

The respondents were an average 2 years older and more likely to be female than nonrespondents, and more than 90% of the responding group was white. Most (90%) graduated from high school and, interestingly, 1 in 8 reported they had been injured by a medical error.

Almost all patients (99%) wanted to be told of a medical error, and most (83%) wanted financial compensation for harm caused by an error. Interestingly, 13% of respondents wanted compensation even if no harm occurred. Full disclosure of the error reduced the reported likelihood of changing physicians and increased patients satisfaction, trust, and positive emotional response, but for the most part did not decrease reported likelihood of seeking legal advice.

This study is limited by its design; that is, by asking patients what they would think in a hypothetical situation rather than studying patients for whom the situation has occurred. This approach tends to make responses more logical and doesn't take into account the positive or negative effects that emotions play during an actual situation. Our interpretation is that how the error is communicated matters just as much as the communication itself.

Cephalosporins better for streptococcus infections in children

Casey JR, Pichichero ME. Meta-analysis of cephalosporin versus penicillin treatment of group A streptococcal tonsillopharyngitis in children. Pediatrics 2004; 113:866–882.

CLINICAL QUESTION

Does the treatment of children with streptococcal tonsillopharyngitis with a cephalosporin instead of a penicillin result in better bacteriologic or clinical cure?

BOTTOM LINE

Treating streptococcal tonsillopharyngitis in children with a cephalosporin instead of penicillin produces significantly more bacteriologic and clinical cures. One additional child will benefit for every 13 children treated with a cephalosporin rather than penicillin. Only the cephalosporins cefaclor (Ceclor) and loracarbef (Lorabid) did not show an advantage over penicillin. The effect of cephalosporin treatment on prevention of rheumatic heart disease is not known. (LOE=**1a**)

STUDY DESIGN
Meta-analysis (randomized controlled trials)

SETTING
Various (meta-analysis)

SYNOPSIS

The authors of this meta-analysis identified 35 studies comparing a cephalosporin with penicillin for 10 days in the treatment of children with group A beta-hemolytic streptococcal pharyngitis. The studies (in all languages) were identified through MEDLINE and EMBASE searches, reference lists of identified trials, and abstracts from the meetings of the Society for Pediatric Research and the Interscience Conference on Antimicrobial Agents and Chemotherapy.

The studies were not all of high quality: 59%

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of the studies had a Jadad score of 0 to 2 (on a scale of 0 to 5, where 5=highest quality) and the majority were not double-blinded and did not conceal allocation assignment. In other words, there is a strong possibility that the studies have significant flaws that cannot be overcome by meta-analytic methods. Fortunately, the results were stronger in the better-quality studies.

Overall, bacteriologic cure was significantly more likely with cephalosporin treatment (92.6% vs 80.6%; number needed to treat [NNT]=8), as was clinical cure (93.6% vs 85.8%; NNT=13). Bacteriologic cure rates did not differ whether a first-, second-, or third-generation cephalosporin was used. Bacteriologic cure rates with penicillin decreased slightly, but significantly, from the 1970s (83.4%) to the 1990s (79.4%).

The researchers found no evidence of publication bias. Study results were similar with regard to bacterial cure (ie, no heterogeneity), but differences in clinical cure occurred among studies of cefuroxime and loracarbef.

Watch for these articles coming soon

Is religious devotion relevant to the doctor-patient relationship?

Allowing spirituality into the healing process

Principles to make a spiritual assessment work in your practice

British Hypertension Society guidelines (BHS-IV)

Williams B, Poulter NR, Brown MJ, et al. British hypertension society guidelines for hypertension management 2004 (BHS-IV): summary. BMJ 2004; 328:634–640.

CLINICAL QUESTION

How should hypertension be managed?

BOTTOM LINE

The British Hypertension Society guidelines (BHS-IV) and the American Joint National Committee guidelines (JNC-7) are very similar in treatment goals. However, the BHS-IV guidelines do not require treatment until both the systolic and diastolic numbers are greater than 160/100 mm Hg, respectively, for patients without cardiovascular disease, diabetes, or other organ damage, whereas the JNC-7 guidelines start drug treatment in all patients with both numbers greater than 140/90 mm Hg. The BHS-IV suggests initial treatment with any 1 of 4 drugs (see the ABCD rule in the synopsis), whereas the bedrock of treatment recommended by the JNC-7 is diuretics, primarily because of the lower cost. (LOE=**5**)

STUDY DESIGN

Practice guideline

SETTING

Various (guideline)

SYNOPSIS

The British Hypertension Society has issued their fourth update on the treatment of hypertension (BHS-IV). The guidelines give a strength of recommendation on the basis of the quality of evidence, ranging from A (directly based on a meta-analysis of controlled trials) to D (expert recommendation or extrapolation from other data).

The guidelines recommend suggesting lifestyle modification for patients with high nor-

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mal blood pressure, defined as a 130–139/85–89 mm Hg (strength of recommendation [SOR]=**A**). Treatment of blood pressure in the range of 140–159/90–99 mm Hg requires consideration of the presence of cardiovascular disease, other target organ damage, diabetes mellitus, or an estimated cardiovascular disease risk of at least 20% over 10 years (SOR=**A**). Drug therapy should begin when the blood pressure is >160/100 mm Hg (SOR=**A**). The goal of treatment should be a blood pressure of >140/85 mm Hg for nondiabetic patients, and >130/80 mm Hg in diabetic patients (SOR=**B**).

Initial treatment should be based on the ABCD rule, a mnemonic for remembering that younger (aged <55 years) and nonblack patients will respond better to an Angiotensin-converting enzyme inhibitor or a Beta-blocker, and older patients and blacks of any age will respond better to a Calcium-channel blocker or a Diuretic (SOR=**C**). If a second drug is needed, it should be from the other category (that is, a patient on an A or B drug should have a C or D drug added, and vice-versa). Many patients will need at least 2 drugs to obtain the necessary blood pressure control.

DRUG BRAND NAMES
Azithromycin • Zithromax
Cefaclor • Ceclor
Clarithromycin • Biaxin
Loracarbef • Lorabid
Metronidazole • Flagyl
Omeprazole • Prilosec
Simvastatin • Zocor

THE JOURNAL OF FAMILY PRACTICE

Evidence-based medicine ratings

THE JOURNAL OF FAMILY PRACTICE uses a simplified rating system system called the Strength of Recommendation Taxonomy (SORT). More detailed information can be found in the February 2003 issue, "Simplifying the language of patient care," pages 111–120.

Strength of Recommendation (SOR) ratings are given for key recommendations for readers. SORs should be based on the highest-quality evidence available.

- **A** Recommendation based on consistent and good-quality patient–oriented evidence.
- **B** Recommendation based on inconsistent or limited-quality patient-oriented evidence.
- **C** Recommendation based on consensus, usual practice, opinion, disease-oriented evidence, or case series for studies of diagnosis, treatment, prevention, or screening

Levels of evidence determine whether a study measuring patient-oriented outcomes is of good or limited quality, and whether the results are consistent or inconsistent between studies.

STUDY QUALITY

1—Good-quality, patient-oriented evidence (eg, validated clinical decision rules, systematic reviews and meta-analyses of randomized controlled trials [RCTs] with consistent results, high-quality RCTs, or diagnostic cohort studies)

2—Lower-quality patient-oriented evidence (eg, unvalidated clinical decision rules, lower-quality clinical trials, retrospective cohort studies, case control studies, case series)

3—Other evidence (eg, consensus guidelines, usual practice, opinion, case series for studies of diagnosis, treatment, prevention, or screening)

Consistency across studies

Consistent—Most studies found similar or at least coherent conclusions (coherence means that differences are explainable); *or* If high-quality and up-to-date systematic reviews or meta-analyses exist, they support the recommendation

Inconsistent—Considerable variation among study findings and lack of coherence; *or* If high-quality and up-to-date systematic reviews or meta-analyses exist, they do not find consistent evidence in favor of the recommendation