The iPhone is the coolest new PDA/Smartphone on the market, but can it help a physician teach and practice medicine? The original iPhone with the original software was not capable of running medical applications. The new Apple software now accommodates third-party applications, including the immensely popular and useful Epocrates. The new G3 iPhone is half the price and twice the speed as the first iPhone. Epocrates has released a free Rx package for the iPhone that has the same functionality as the free Rx package for Palm devices and Windows devices. It has one new cool picture function with pill pictures and a pill ID finder. Unfortunately there is a second lag time between the time that you start Epocrates and the time you have access to the touch keyboard to search for medications. The extra Epocrates features that you can purchase for other operating systems are not available for the iPhone. The ones that are especially useful include the drug calculator for pediatric dosing and the Infectious Disease tool. With the pill ID tool you can describe an unknown pill and find the name of the medication that goes with it. The application can be found at www.epocrates.com/products/rx/iphone.html or in the Apps Store in iTunes.

The next most important development in iPhone usage for medical applications is the production of the iSilo™ program for iPhone. iSilo is a sophisticated document reader that allows you to read many medical

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Teaching Points — A 2-minute Mini-lecture

Post-traumatic Stress Disorder in Primary Care Patients

By John R. Freedy, Medical University of South Carolina

Editor’s Note: The process of the 2-minute Mini-lecture is to get a commitment, probe for supporting evidence, reinforce what was right, correct any mistakes, and teach general rules. In this scenario, Dr Freedy (Dr F) works with a second-year resident (PGY-2) who has seen a woman who has had several traumatic events in her life.

PGY-2: Ms B is a 43-year-old woman who is new to the area in the past few months. She’s here today for a physical exam. She’s pretty healthy, really. A bit of minor low back strain from time to time. This is not bothering her right now. I want to order a mammogram; its been over 1 year, but her previous mammogram was fine. She’s never had an abnormal pap smear; the last one was less than a year ago. I plan to follow-up with that next time. She’s not on any medications so won’t need refills.

Dr F: Anything else of interest? PGY-2: I’m not really sure. I was in there for more than 30 minutes. She kept dropping “bombs” about psychosocial issues. I didn’t really know what to do. With everything else we needed to talk about, I didn’t feel there was time to address these bombs.

Dr F: When you say bombs, what do you mean?

PGY-2: Well, about 5 years ago, she left an abusive marriage. She hadn’t seen him in about 2 years, and he lives in a different state. Apparently, last week he just showed up to see their kids.

Dr F: Okay, how did seeing him affect her and their children? Did you ask her if she is safe at present?

PGY-2: Like I said, I had so much to cover, there really wasn’t time to get into details. I’m not sure what I’d be able to do about her psychosocial issues

(continued on page 3)
Practicing and Teaching Medicine With the iPhone

applications created for the PDA. The best collection of medical applications for iSilo and the PDA can be found at MeisterMed’s Medical iSilo™ Depot. Currently, the iSilo introductory price is only $9.99, and this is a bargain since it is half the price of iSilo for the Palm. Most of the MeisterMed products are available for free, including DermMeister, which was created by Dr Andrew Schechtman and me. Other valuable MeisterMed products provide help with topics such as sexually transmitted diseases (STDs), antibiotic prophylaxis, ICD-9 codes, electrolytes, and flu vaccinations. This is just the tip of the iceberg, so I suggest you go to the following Web sites: www.meistermed.com/iphone.htm and www.meistermed.com/isilodepot/index.htm.

Other valuable applications for the iPhone include Mediquations, which was designed and developed by a third-year medical student from the University of Texas Medical Branch. Mediquations includes 104 formulas and scores, and the price is only $4.99. This replaces Medmath or MedCalc used on the Palm PDAs. A completely free medical calculator can also be found, and while it only has a dozen formulas, it has a nice pregnancy wheel. Two more pregnancy wheels are freely available through the App Store (use the Healthcare and Fitness tab). Eponyms (with a long list of diseases and signs named after famous doctors) has been recreated for the iPhone and provides definitions and some historical information. There are a number of ruler programs that turn your iPhone into a measuring device. This can be helpful if you can’t find a ruler around the office and need to measure something on the patient.

This has been a quick review of the medical software available for the iPhone in September 2008. People are feverishly creating new applications for the iPhone, and so there is much more to come. The iPhone itself is an amazing PDA/Smartphone that functions as a phone, an e-mail device, a Web browser, and a camera. The GPS, the maps, and the iPod make this an innovative all-in-one technology tool. At the price of $199 plus monthly fees, you can’t go wrong if you like technology and want to be at the cutting edge of portable technology for the practice and teaching of medicine. One barrier is that you must use AT&T cell phone service to use the iPhone. If you don’t have an iPhone now, one of your students will show up with one in your office. Let them give you a tour, and you will be tempted to get one in the future.

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anyway. By the way, she also told me that she was raped at age 25 and that she was sexually abused by her stepfather as a child.

**Dr F:** Okay, let’s just take a deep breath here. I think you may be feeling that your job is to “fix it” with this patient. Obviously, it’s not possible to fix the impact that each of these traumatic events had upon her sense of self, certainly not in your first meeting! So, we need to start by having you define what your role is with this patient at this time.

**PGY-2:** What do you mean, my role? I’m just trying to get through a complicated history and physical. All this psychosocial stuff is overwhelming. I just don’t know what to do!

**Dr F:** Let’s start with the idea that you are feeling what she is feeling—anxious and overwhelmed. This is a key clinical finding; you have recognized what she feels about herself and her life. It is anxiety provoking and overwhelming! Right now, your job is not to fix that for her. Rather, your job is to tolerate these feelings, her feelings, while you do two things. First, you need to take the time to form a relationship with her. Second, you need to gather clinically relevant information that helps you to understand the major factors that may now, or in the future, impact her health.\(^1,2\)

**PGY-2:** Well, she already has a psychologist that she has been seeing to talk about these issues. Isn’t knowing that she is going to someone enough?

**Dr F:** Let’s talk about what this patient needs from you. Like any patient, she needs to know that you understand what is important to her. This is how you go about forming a trusting doctor-patient relationship with her. Communicate to her that you know what is important in her life.\(^1,2\) Do you think it is an accident that she told you at least three times that she has been abused repeatedly in her life?

**PGY-2:** I guess not, but it still seems hard to address psychosocial needs with so little time.

**Dr F:** It is a challenge but not impossible. For example, I want to tell you about a study that some colleagues and I conducted at this clinic. We interviewed 411 adult patients and asked about traumatic life events, mental health symptoms, and patient attitudes about their doctors. Almost 90% of patients agreed it was appropriate for their family doctor to ask questions about traumatic life events and related mental health issues. But, only 25% of men and 40% of women reported that their family doctor had asked them about such things.\(^3\)

**PGY-2:** So, you’re telling me that patients don’t mind being asked about sexual abuse, rape, or other traumatic events? That’s pretty amazing!

**Dr F:** That’s what adult patients tell us. They think it is appropriate for their family physician to ask about traumatic events and about how such events impact their mental health. Think about it—people often come to their doctor to fight a sense of being alone or isolated with regard to some problem.\(^1,2\) So, a key task to forming a meaningful doctor-patient relationship, particularly if the patient has experienced a traumatic event, is your being willing to ask some simple questions about such events and how these events affected the patient.

**PGY-2:** Okay, I see what you are saying, but I still worry that I will get bogged down in too many details. I mean, what do I do if the patient falls apart?

**Dr F:** Remember, your task here is twofold. First, you are trying to form a trusting doctor-patient relationship. That comes from her experiencing that you understand how her past rape or other traumatic events are an important issue in her life. Second, you are trying to gather clinically relevant information. You don’t have to fix anything today. While you’ve picked up on her underlying anxiety, it is not your task to take that away from her right now.\(^1,2\) Her psychologist or other aspects of her support system will help her to cope with her emotions. By not overreacting, you are providing her with a model that there is no need to be frightened by what she is feeling about herself.

**Dr F:** I think I see what you are getting at, I should just accept that she may leave here today feeling overwhelmed or anxious. It just doesn’t feel right, but I see what you are saying.

**Dr F:** Our assessment is that feeling overwhelmed and anxious is a natural state for her given that she has been repeatedly abused throughout her lifetime. I mean, first she is sexually abused as a child by her stepfather, then she is raped at age 25, finally, she is physically abused, and goodness knows what else by her ex-husband. It would be disrespectful of me as her physician to make her pretend that such events in her life have not been terribly painful.\(^2\) By offering her a chance to be herself with me, no need to pretend that she feels better than she does, she gains a sense of acceptance from me that may carry over until the next time that I see her.\(^1,2\)

**PGY-2:** Now I see what you are getting at. I’m serving as sort of a role model. If I can discuss what is most important to her, even briefly, without becoming overly emotional, I am really conveying a sense of validation and respect toward her.\(^1,2\)

**Dr F:** That’s right, and a sense of hope, an expectation really, that she can cope with whatever is going on in her life, well enough until you are able to see her again. Why don’t you go wrap things up with her for today but offer the opportunity to see her back in a few weeks. You might tell her, “I just want to check back in with you to see how you are managing all of this stress in your life.” I think she’d appreciate the offer.

In about 15 minutes, the resident physician returns and the conversation continues.

**PGY-2:** That went a lot better than I thought it would. She gave me a hug as she left and said she would be back in 3 weeks. I’m a little nervous about where all of this will take us—me and her that is.

**Dr F:** Well, let’s remember that your anxiety about all of this is a clinical
finding. You are picking up on the fact that she is feeling overwhelmed and anxious, remember?

PGY-2: I know you’re right, Dr F, but I still feel like I’m getting in over my head.

Dr F: I’m actually glad to hear you say that you feel over your head. That tells me both that you recognize the importance of this patient’s psychosocial problems and that you recognize that you need more knowledge and skill to properly address her psychosocial problems.

PGY-2: Okay, but where do I get the knowledge and skill to deal with this patient’s problem? I’m not being trained as a psychiatrist in this residency!

Dr F: You’re right, you are not her psychiatrist, but you are her family doctor. Did you know that family doctors and other primary care clinicians provide most of the mental health care delivered in the United States?

PGY-2: I didn’t know that. Is that really true?

Dr F: It is true and let me tell you why. There are a lot of barriers to seeking mental health care. From the patient’s perspective, there are many advantages to seeing a family doctor: accessibility (it is easier to get an appointment with a family doctor), cost (it is cheaper to see a family doctor), insurance issues (most plans limit visits to mental health specialists), trust (patients generally trust their primary care doctor), and privacy (no one but the patient and the doctor need to know why the patient is being seen).

PGY-2: So from my patient’s point of view, it may be a lot easier for her to see me for a mental health problem instead of a psychiatrist or other mental health specialist.

Dr F: That’s right. I’m not saying that you can’t or shouldn’t ever refer to a mental health specialist. But, I am saying that you should listen to your patient’s psychosocial concerns carefully, be aware that your patient may want and trust your help with such problems, and develop the knowledge and skill base necessary to manage such problems and to recognize when referral is appropriate.

PGY-2: So, I should be willing to talk to my patient more about these psychosocial issues and how these impact her mental and physical health. I also need to improve my knowledge and skill base about how traumatic events may affect mental and physical health. Is that right?

Dr F: That is what I’m saying. You should also be willing to provide mental health treatments within your scope of expertise: psychotropic medications, education, basic psychological counseling. You will learn to recognize when referral is appropriate. At your stage of training, most doctors err on the side of referring too early. Without sufficient trust between you and your patient, they are less likely to accept your referral to speak with a mental health specialist. The patient may even view a premature mental health referral as a rejection by their primary care physician.

PGY-2: I think you’re onto something, Dr F. Less than half of my patients referred for mental health issues actually show up at their scheduled mental health appointment. You’re saying I should “hold onto” those patients longer, talk to them more, and develop my knowledge and skill base further so that I’m more comfortable with at least initially addressing their mental health concerns.

Dr F: That’s exactly right. Let me give you some resources to read over. Once you’ve read over these sources, I want us to talk again so that you will be better prepared to understand and address this patient’s mental health needs when you see her next (see below for list of resources suggested to PGY-2).

PGY-2: Thanks Dr F, I’ll read these things over and then you and I can talk again.

Dr F: I’ll look forward to it!

Suggested Resources for PGY-2:


REFERENCES


Alec Chessman, MD, Medical University of South Carolina, Editor

October 2008
Clinical Guidelines That Can Improve Your Care
It’s That Time of Year—What You Need to Know About Flu Vaccine This Year
By Caryl Heaton, DO, UMDNJ-New Jersey Medical School

The current version of the Centers for Disease Control (CDC) and Advisory Committee on Immunization Practices (ACIP) influenza vaccine recommendations has a few important changes to the 2007–2008 version. Annual vaccination of all children aged 5–18 years is recommended. That was to start in September 2008, so if you have your vaccine, go to it. Annual vaccination of all children 6 months–4 years should continue. Older children with risk for influenza complications should have been started last year; if you are short of vaccine, it makes sense to reserve it for the very young and those at risk (Table 1). Annual vaccination of all children aged 5 to 18 years should begin no later than during the 2009–2010 influenza season. Either trivalent influenza vaccine (TIV) or live attenuated influenza vaccine (LAIV) can be used for persons aged 2–49 years. Children aged 6 months to 8 years should get two doses (separated by 4 weeks) if they have not had it before. If they only got one dose last year, they should get two this year, separated by 4 weeks. LAIV should not be given to children with reactive airway disease, ie, a diagnosis of asthma or wheezing. Adults older than 49 should get TIV. These recommendations are summarized in Table 2. For those of you who like to know these things, the virus strains are A/Brisbane/59/2007 (H1N1)-like, A/Brisbane/10/2007 (H3N2)-like, and B/Florida/4/2006-like antigens.

In adults, vaccination is still recommended to “any adult who wants to reduce the risk for becoming ill with influenza or of transmitting it to others,” so that pretty much covers everyone. As we all know, there are those who resist. The high-risk conditions are listed in Table 1; these are the folks we should push and document that they refuse, if they do. For those with paper charts, a standing order sheet can document that the vaccine was appropriately offered and given or refused. A link to a standing order sheet is provided in our FMDRL “bundle” of influenza documents; see below.

Both TIV and LAIV are grown in eggs, and both contain the same antigen strains. TIV is made from killed virus and cannot cause influenza (no matter what our patients tell us). LAIV is the intranasal flu shot, and while more acceptable to some patients, it does contain live “attenuated” virus and can cause mild symptoms such as runny nose, nasal congestion, fever, or sore throat. LAIV is mercury/thimerosal free as are some forms of pre-filled 0.5 ml single doses of TIV. The multi-dose vials of TIV have some preservative, in the form of mercury.

There are no changes on the recommendations for the use of antiviral medications; oseltamivir (Tamiflu®) or zanamivir (Relenza®) can be prescribed if antiviral chemoprophylaxis or treatment of influenza is indicated. While some resistance to oseltamivir was seen in Influenza A last year (7.6%), both medications are still recommended. Oseltamivir can be given to younger children. Oseltamivir is licensed for treatment and chemoprophylaxis of influenza in kids aged >1 year, and zanamivir is licensed for treating influenza in children aged >7 years but can be used chemoprophylaxis in children.

Table 1
Children, Adolescents, and Adults Who Are at Risk for Complications and Should Have Highest Priority

Persons at risk
- All children aged 6 months to 4 years (59 months)
- All persons aged ≥50 years
- Children and adolescents (aged 6 months to 18 years) who are receiving long-term aspirin therapy and who, therefore, might be at risk for experiencing Reye syndrome after influenza virus infection
- Women who will be pregnant during the influenza season
- Adults and children who have chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, hematological, or metabolic disorders (including diabetes mellitus)
- Adults and children who have immunosuppression (including immunosuppression caused by medications or by human immunodeficiency virus [HIV])
- Adults and children who have any condition (eg, cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders) that can compromise respiratory function or the handling of respiratory secretions or that can increase the risk for aspiration
- Residents of nursing homes and other chronic-care facilities
- Persons who live with or care for persons at high risk
- Health care providers (HCP)
- Healthy household contacts (including children) and caregivers of children aged ≤59 months (ie, aged <5 years) and adults aged ≥50 years
- Healthy household contacts (including children) and caregivers of persons with medical conditions that put them at higher risk for severe complications from influenza
Table 2

Recommendations for Vaccinations

<table>
<thead>
<tr>
<th>Who to Vaccinate</th>
<th>Type of Vaccination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children 6 months–23 months</td>
<td>TIV (two doses if they only had one last year)</td>
</tr>
<tr>
<td>Children 6 months–8 years with reactive airway disease or wheezing</td>
<td>TIV (two doses if they only had one last year)</td>
</tr>
<tr>
<td>Children 24 months to 8 years with no higher risk</td>
<td>TIV or LAIV (two doses if they only had one last year)</td>
</tr>
<tr>
<td>Children 9 years–adults 49 years</td>
<td>TIV or LAIV (but use TIV if patient has chronic conditions)</td>
</tr>
<tr>
<td>Adults &gt; 49 years</td>
<td>TIV</td>
</tr>
</tbody>
</table>

TIV—trivalent influenza vaccine  
LAIV—live attenuated influenza vaccine

Table 3

Websites for 2008-2009 Materials

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Web Site Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza Antiviral Medications: Summary for Clinicians</td>
<td><a href="http://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm">http://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm</a></td>
</tr>
<tr>
<td>“What you need to know”—Inactivated Influenza vaccine (TIV)</td>
<td><a href="http://www.immunize.org/vis/2flu.pdf">http://www.immunize.org/vis/2flu.pdf</a></td>
</tr>
<tr>
<td>“What you need to know”—Live, Intranasal Influenza Vaccine (LAIV)</td>
<td><a href="http://www.immunize.org/vis/liveflu.pdf">http://www.immunize.org/vis/liveflu.pdf</a></td>
</tr>
<tr>
<td>Spanish Version—“What you need to know”—Inactivated Influenza vaccine (TIV)</td>
<td><a href="http://www.immunize.org/vis/spflu06.pdf">http://www.immunize.org/vis/spflu06.pdf</a></td>
</tr>
<tr>
<td>Spanish Version—“What you need to know”—Live, Intranasal Influenza Vaccine (LAIV)</td>
<td><a href="http://www.immunize.org/vis/spliveflu06.pdf">http://www.immunize.org/vis/spliveflu06.pdf</a></td>
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References

2. Use of Standing Orders Programs to increase adult vaccination rates. http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4901a2.htm.

Caryl Heaton, DO, UMDNJ-New Jersey Medical School, Editor  
Diana Heiman, MD, University of Connecticut, Co-Editor

agged >5 years. Antiviral medication can be given at the same time as TIV, but LAIV should not be given until 48 hours after antiviral medication has been completed. Conversely, antiviral meds should not be given for 2 weeks after a patient receives LAIV.

There are many useful handouts at the Centers for Disease Control (CDC) influenza Web site (www.cdc.gov/flu/professionals/), including the Influenza Vaccine: What You Need to Know 2008–2009 handouts. The url for handouts for “what you need to know” for both types of flu vaccine in both English and Spanish, along with a guide to anti-influenza medication, are shown in Table 3. Also included are standing orders form for influenza vaccine.

Surprisingly, this CDC recommendation does not say much about the data to suggest that standing orders are effective, but it does say “Strategies to improve vaccination levels, including using reminder/recall systems and standing orders programs, should be implemented whenever feasible.”

The guideline states that the annual supply of vaccine and the timing of distribution cannot be guaranteed at any year. Approximately 113 million doses of vaccine were given last year, and the production this year “is anticipated to be over 130 million.” Let’s all hope we have it when we need it, especially for our most vulnerable patients.
Evidence-based Answer
Essentially all antiepileptic medications can raise liver enzymes or cause hepatic toxicity as a rare side effect; “periodic” liver enzyme monitoring is recommended (SOR C, based on expert opinion). However, valproate and felbamate are associated with higher rates of hepatic failure (SOR B, based on cohort studies) and have specific liver function monitoring recommendations.

A recent systematic narrative review concluded that adverse hepatic events can occur with any antiepileptic drug; these effects may range from mild elevations in liver enzymes to rare cases of hepatitis or liver failure.1 Unfortunately, severe hepatotoxicity can occur after repeatedly normal liver function measurements. Consequently, baseline and periodic liver enzyme monitoring was recommended.

With the exception of felbamate, second-generation antiepileptic medications (eg, gabapentin, lamotrigine, topiramate, levetiracetam, oxcarbazepine, zonisamide) generally have a decreased incidence of hepatic enzyme elevations compared with older medications (eg, phenobarbital, phenytoin, carbamazepine, valproate).1

In an investigation conducted by the World Health Organization, valproate was the third most common drug associated with liver injury.2 A total of 37 fatalities due to hepatic failure were attributed to valproate use in the United States between 1978 and 1988. For individuals receiving valproate monotherapy, the calculated fatality rate was 1 in 37,000.3 The risk of hepatotoxicity is greatest among children younger than 2 years, and valproate use is contraindicated for patients with preexisting liver disease or significant hepatic dysfunction.4 The FDA black box warning for valproate recommends performing pretreatment liver function tests and frequent monitoring throughout therapy, particularly within the first 6 months.

Hepatotoxicity with felbamate was reported at an incidence of 1 in 10,000 patients.5 Felbamate is currently not considered a first-line agent for epilepsy but remains on the market with an FDA black box warning for hepatic failure. The manufacturer recommends written consent be obtained prior to beginning therapy and that liver function tests be monitored throughout therapy.

References
Pioglitazone Does Not Increase Cardiovascular Events (PROactive)

Clinical Question: What is the effect of pioglitazone (Actos) on the likelihood of cardiovascular events in patients with diabetes at high risk?

Setting: Outpatient (specialty)

Study Design: Randomized controlled trial (double-blinded)

Funding: Industry

Allocation: Concealed

Synopsis: To study the effect of pioglitazone on cardiovascular events, these European researchers enrolled 5,238 high-risk patients with diabetes for an average 9.5 years. Most of the patients (75%) had hypertension, half had myocardial infarction in their history, and 19% had experienced a stroke. In addition to their aggressive treatment for all of these risk factors, patients were randomized (allocation concealed) to receive either placebo or pioglitazone, force-titrated to 45 mg/day, for 3 years. Over this time period, approximately 11% of patients experienced at least one of the three events that made up the composite outcome evaluated in this report: cardiovascular death, nonfatal myocardial infarction, or nonfatal stroke. The researchers report a statistically significant difference between treatment and placebo, though their statistical analysis was suspect and likely improper. Despite having several analyses, they did not adjust the P value for multiple comparisons. Also, none of the outcomes, when assessed individually, were statistically lower in the treated group. For a composite outcome to be considered valid, at least one of the individual outcomes should be statistically significant. An even greater threat to the validity of this study is that the overall goal of the PROactive study was to evaluate the effect of pioglitazone on a different composite outcome, all-cause mortality, nonfatal myocardial infarction, stroke, acute coronary syndrome, endovascular or surgical intervention in the coronary or leg arteries, and amputation above the ankle. There was no difference with therapy on this outcome (Lancet 2005;366:1279-89). Researchers cannot slice and dice their data so that they find a significant difference.

Bottom Line: Pioglitazone (Actos), unlike its chemical cousin rosiglitazone (Avandia), does not seem to increase the likelihood of cardiovascular events (N Engl J Med 2007;356:2457-71). The researchers conducting this study stretched—and broke—the scientific method when claiming benefit, but any claims of benefit are specious. (LOE=1a)


Fluoroquinolones=Beta-lactam for Acute Bacterial Sinusitis

Clinical Question: Are fluoroquinolones more effective than beta-lactam antibiotics for acute bacterial sinusitis?

Setting: Outpatient (any)

Study Design: Meta-analysis (randomized controlled trials)

Funding: Unknown/not stated

Allocation: Uncertain

Synopsis: The authors identified 11 studies that compared a fluoroquinolone with a beta-lactam for ABRS. Study quality was mixed: five studies were open label, five did not adequately describe randomization, eight did not describe allocation concealment, and four did not describe patient withdrawals. The fluoroquinolones studied were moxifloxacin (four), levofloxacin (three), gatifloxacin (one), ciprofloxacin (two), and sparfloxacin (one). The most common comparison drugs were cefuroxime axetil (five studies) and amoxicillin clavulanate (five studies). The dose of the comparator drug was adequate; eight studies required computed tomography or radiographic abnormalities for inclusion in addition to typical symptoms of ABRS. Using intention-to-treat analysis, there was no benefit to fluoroquinolones compared with beta-lactams regarding clinical success (odds ratio [OR]=1.09; 95% confidence interval [CI]=0.85–1.39). If you included all “clinically evaluable” patients (ie, per protocol analysis), there was a slight benefit to fluoroquinolones (OR=1.29; 1.03–1.63). Interestingly, the benefit was similar for nonrespiratory fluoroquinolones, which are supposed to have very limited activity against the bacteria that cause ABRS.

Bottom Line: The authors found no benefit to fluoroquinolones over beta-lactams for acute bacterial rhinosinusitis (ABRS). The more important and relevant questions are whether we can distinguish ABRS from viral sinusitis (not very well) and whether antibiotics are needed at all (probably not for most patients). If you decide to prescribe an antibiotic because of severity of illness or duration of symptoms, a beta-lactam will work as well as a fluoroquinolone. (LOE = 1a)

Rhythm Control No Better Than Rate Control in AF + CHF

Clinical Question: What is the best strategy for managing atrial fibrillation in patients with heart failure?

Setting: Outpatient (any)

Study Design: Randomized controlled trial (double-blinded)

Allocation: Unconcealed

Synopsis: Previous studies have consistently shown no benefit to rhythm control over rate control in patients with atrial fibrillation (AF), provided they were anticoagulated. This study looked at the important subset of patients with AF who also have left ventricular dysfunction. In this study, researchers recruited 1,376 patients with a left ventricular ejection fraction of less than 35% and an episode of AF lasting at least 6 hours or requiring cardioversion within the past 6 months or an episode lasting at least 10 minutes within the past 6 months and a history of cardioversion. Patients with persistent AF for more than 12 months were excluded. Their mean age was 66 years, and 82% were men. Groups were fairly well balanced at the start of the study—although there were more men in the rate control group—and analysis was by intention to treat. The study was not masked, and allocation did not appear to have been concealed. Follow-up was good, with 94% of patients completing follow-up or dying and a median follow-up of survivors of 47 months. Most patients in the rhythm control group were taking amiodarone, and 90% of patients received an angiotensin-converting enzyme inhibitor or angiotensin receptor blocker, and 90% were anticoagulated. Crossovers occurred in both directions: 21% from rhythm to rate (for inability to maintain sinus rhythm) and 10% from rate to rhythm (for worsening heart failure). There was no difference in the rates of cardiovascular death (27% for rhythm versus 25% for rate control) or all-cause mortality (32% versus 33%).

Bottom Line: Rhythm control is no better than rate control for patients with atrial fibrillation, even if they have left ventricular dysfunction. (LOE=1b)


LOE—level of evidence. This is on a scale of 1a (best) to 5 (worst). 1b for an article about treatment is a well-designed randomized controlled trial with a narrow confidence interval.

Mark Ebell, MD, MS, Michigan State University, Editor

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