

ICP Consultant Connection

Institutional Care Pharmacy • Tiffin, Ohio • Mason, Ohio • Sharpsville, Pennsylvania

ICP Expands South

ICP Inc. welcomes a new addition to our corporation, the acquisition of Dabe Medical owned by Kim Dabe, and Fasse Dabe LLC, owned by Susan Fasse and Kim Dabe.

Dabe Medical formerly known as Miami Valley Respiratory Care began providing respiratory products and services to southwest Ohio area nursing facilities in 1985. In 1996, Dabe Medical incorporated as K. L. Dabe and Associates, Inc.

As a growth-oriented company, in 2000 Dabe Medical purchased the respiratory care portion of Certified Medical in Middletown, Ohio expanding its respiratory client list. Also in 2000, the company added Fasse Dabe LLC to do contract billing services for nursing facilities and DME companies. Soon after, they added enteral nutrition, equipment, supplies, and clinical support for clients residing in nursing facilities in much the same fashion as our Tiffin location. In 2010, Fasse Dabe LLC won the Medicare Competitive Bid for southwest Ohio, southeast Indiana, and north central Kentucky.

ICP Southern Region becomes an extension of our Ancillary Services Unit which includes medical supplies, Medicare Part B products and billing services and respiratory equipment and supplies.

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Mission Statement:

ICP is committed to exceeding our customers' and employees' expectations through quality health-care service, continuous education, and effective communication.

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Comparing Anticoagulants for treatment of Atrial Fibrillation

AFib is a type of irregular heartbeat. It occurs when one or both of the upper chambers of the heart - called the atria - beat erratically. This puts them out of sync with the heart's 2 lower chambers - called the ventricles. AFib affects more than 2 million people in the United States. The odds of developing AFib go up with age. In fact, the American Heart Association states that AFib is the most common serious type of irregular heartbeat in people over age 65. It's also sometimes associated with other health problems, such as heart disease, diabetes, or high blood pressure.

Having AFib puts you at a nearly 5 times greater risk of a stroke than if you don't have it, even if you have no symptoms. When your heart beats irregularly, it doesn't pump blood as it should. This can cause blood to pool in the upper chambers of your heart (called the atria). This pooling can cause a blood clot to form in your heart. A clot in your heart can break away and travel directly to your brain. There, it can block an artery and cause a stroke.

Stroke can be prevented in most AF patients by using anticoagulants, or blood thinners. Anticoagulants reduce your blood's ability to clot (coagulate). Most people over age 60 who have atrial fibrillation can be treated with a blood thinner. Warfarin (Coumadin and Jantoven) is an anticoagulant that has been extensively studied and prescribed by doctors to help reduce the risk of stroke in people with AFib since 1954. These drugs must be very carefully monitored because too much blood thinner can cause abnormal bleeding.

To be sure you're getting the right amount of warfarin, your doctor will do a test called a Prothrombin Time. (This test is also called "ProTime" or "PT.") The results of this test may be reported to you as an "INR" number. By using an INR (International Normalized Ratio), your doctor can keep your blood clotting at a safe and effective level. Your INR should usually test between 2.0 and 3.0.

Long-term use of warfarin in patients with atrial fibrillation and other stroke risk factors can reduce stroke by upwards of 70 percent. Warfarin can prevent stroke when used as directed, and the risk of stroke is greater than the risk of bleeding if you have AFib.

Since the introduction of the new anticoagulants, dabigatran (Pradaxa) and rivaroxaban (Xarelto), there are now alternatives to warfarin for the treatment of atrial fibrillation. While both dabigatran and warfarin are anticoagulants, they work differently to help reduce the risk of stroke due to AFib not caused by a heart valve problem. Warfarin is a vitamin K antagonist that helps to stop clots from forming by interfering with vitamin K—a vitamin your body needs to form clots. Dabigatran is a direct thrombin inhibitor that helps to stop clots from forming by working directly on thrombin.

Dabigatran may be more effective than warfarin in some patients. Results from the RE-LY study showed that compared to warfarin, dabigatran may give slightly better

stroke prevention, with similar chances for bleeding on either blood thinner. Other advantages of dabigatran over warfarin include the lack of requirement for changes to your diet. When you take warfarin, you need to avoid foods high in vitamin K, such as large amounts of leafy green vegetables and some vegetable oils. This is because Vitamin K can affect the way warfarin works in your body. You also need to avoid alcohol, cranberry juice, and products containing cranberries.

There are some disadvantages of dabigatran over warfarin. Dabigatran is taken by mouth 2 times each day—with or without food. Warfarin is taken by mouth once every day—with or without food. Dabigatran is known to cause more stomach pain and/or stomach upset than warfarin. Also, dabigatran should be used cautiously in people with kidney problems, and dose adjustments are sometimes required. Your doctor should test your kidney function before you start dabigatran and in some cases yearly thereafter. Dabigatran tablets are only good for 4 months after opening the bottle. In emergencies that involve bleeding, there are currently no medications available to reverse the effects of dabigatran. In contrast, the effects of warfarin can be reversed by giving vitamin K. And, Compared to warfarin, dabigatran has been associated with a very slight increase in the incidence of heart attacks.

Recently, the FDA has approved Xarelto (rivaroxaban) to prevent stroke in patients with atrial fibrillation - with a strong "black box" warning. A black box warning is the FDA's strongest warning. Xarelto had previously been approved to prevent blood clots in patients receiving hip and knee replacements.

Rivaroxaban now joins dabigatran as alternatives to warfarin to prevent stroke-causing blood clots in patients with atrial fibrillation not caused by a heart valve problem. Like warfarin and dabigatran, rivaroxaban is a blood thinner. It is the first direct factor Xa (pronounced 10a) inhibitor and can cause dangerous bleeding. Xarelto can also increase the risk of stroke or forming blood clots in other parts of your body if people stop taking it without medical supervision. That's the main warning in the "black box" on the Xarelto label.

Rivaroxaban has once-daily dosing with no routine monitoring of the international normalized ratio (INR) or other coagulation parameters required. This eliminates the need for multiple daily doses or routine dose adjustments. Rivaroxaban has no reported food or drug interactions and has no special storage requirement. However, renal function should be monitored and a dosage adjustment may be needed based on your level of renal impairment.

When you have atrial fibrillation (or AFib) not caused by a heart valve problem, you'll need to work closely with your doctor to help reduce your risk of stroke.

Cindy DeRan, RPh. Consultant Pharmacist, ICP, Inc.

Can Vitamin C Be Used To Prevent Urinary Tract Infections?

By: Kyle Steinmetz ONU Pharm D Candidate 2012

The urinary tract is one of the most common sites of bacterial infections in humans. Numerous bacterial organisms may be the cause of urinary tract infections, but the most common pathogen is *E. coli*, which is responsible for roughly 80% of cases of UTI. A variety of antibiotics are used for the prevention and treatment of urinary tract infections, and a growing concern is the increasing resistance of UTI pathogens to conventional antimicrobial agents. Because of this, the use of drugs other than conventional antibiotics for prophylaxis and treatment of UTIs is desired, and the search for such treatments is ongoing.

One such agent proposed to be useful in preventing urinary tract infections is vitamin C. Also known as ascorbic acid, vitamin C is an antioxidant with a number of proposed health benefits, including treatment and prevention of the common cold, hypertension, coronary heart disease, gout, and cancer. The recommended dietary allowance of the vitamin is 75 milligrams per day in women and 90 milligrams per day in men. High-dose vitamin C, at one to two grams per day, is commonly used for disease treatment and prevention. When the vitamin has been used in even higher daily doses, several types of adverse effects have been reported, including diarrhea, hyperglycemia, hemolysis, and renal failure.

Vitamin C is thought to have an effect in UTIs by acidifying the urine. The urine contains nitrates, both obtained from the diet and produced naturally by the body. Bacteria with nitrate reductase activity, such as *E. coli*, convert these nitrates to nitrites. At an acidic pH, the nitrites are then converted to various nitrogen oxides which are toxic to bacteria. Therefore, urine acidified by vitamin C may be deadly to many of the bacteria that cause urinary infections, including *E. coli*.

Although vitamin C has long been suggested as a supplement to prevent UTIs, there have been relatively few studies looking at its effectiveness. The studies that do exist found that decreasing the pH of urine to a level of 5.5 or lower effectively kills *E. coli* bacteria. However, at the doses used in the trials, between two and four grams per day, the vitamin C was not found to effectively lower the pH to this level of acidity, and therefore was not effective in killing the bacteria.

The research on this topic does not support the use of high-dose vitamin C for the prevention of urinary tract infections. Further studies could be done to determine whether even higher doses of the vitamin may be useful for UTIs, but the risk of adverse effects at such doses may be greater than the potential benefits.

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Nuedexa (Dextromethorphan 20mg/ Quinidine 10mg)

Nuedexa is a newly approved drug for pseudobulbar affect (PBA). Pseudobulbar affect occurs when certain neurologic diseases damage the area of the brain that controls emotion such as Multiple Sclerosis, Parkinson's Disease, or stroke. Patients with PBA have sudden outbursts of involuntary, and often inappropriate, laughing or crying. This drug is not proven to be safe for dementia or Alzheimer's disease. An improvement in behavior may be seen as early as one week.

When a patient first begins Nuedexa, they will receive one capsule every morning for 7 days. Starting on day eight, the patient will receive one capsule in the morning and one capsule in the evening, which should be separated by 12 hours in order to avoid an overdose. No dose adjustments are necessary for mild to moderate renal or hepatic impairment. Nuedexa has not been studied in patients with severe renal or hepatic impairment, but is thought to be associated with a higher number of adverse reactions. Nuedexa is contraindicated in patients with an AV block, HF, MAO-I therapy, QT prolongation, and torsade de pointe.

Nuedexa's most common side effects are diarrhea (13%), vomiting (5%), peripheral edema (5%), dizziness (10%), UTI (4%), neuromuscular and skeletal weakness (5%), and cough (4%). Nuedexa is also associated with agranulocytosis, thrombocytopenia, serotonin syndrome, and QT prolongation. Patients should receive baseline potassium and magnesium, CBC, liver and renal function tests, and a QT interval. These tests should also be conducted periodically during treatment.

Recap:

Nuedexa is approved to treat pseudobulbar affect.
Week 1: 1 capsule every morning.
Week 2: 1 capsule in the morning and one capsule at night approximately 12 hours later.
Dosing for renal and hepatic failure has not been established at this time.
Nuedexa's common side effects include diarrhea, vomiting, peripheral edema, dizziness, UTI, neuromuscular and skeletal weakness, and cough.

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COPD Management

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Chronic Obstructive Pulmonary Disease (COPD) or Chronic Obstructive Lung Disease (COLD) is the most common lung diseases in our society. COPD is a term used to describe a disease that interferes with normal breathing and gets worse slowly over time. COPD includes chronic bronchitis and emphysema. Often, people have both.

Smoking is the lead contributing factor of developing COPD and continued smoking increases the probability of developing COPD. Other risk factors include exposure to certain gases or fumes in the workplace, exposure to heavy amounts of secondhand smoke and pollution.

COPD frequently goes undiagnosed because the symptoms appear slowly. Common symptoms are cough (with or without mucus), fatigue, increased respiratory infections, and shortness of breath (dyspnea) especially with activity, chest tightness and wheezing.

The best test for COPD is a simple breathing test called spirometry. It involves blowing hard into a small machine that measures lung capacity.

Remember, there is no cure for COPD but there are things you can do to relieve the symptoms and keep the disease from getting worse.

1. Quit smoking.
2. Use inhalers as ordered by the physician
 - After using inhalers (Spriva, Advair, Symbicort, etc.) the user should rinse their mouth by swishing with water and spitting out, not swallowing, the water.
3. Exercise regularly. It may seem difficult to exercise when you have trouble breathing, but regular exercise can improve overall strength and endurance and strengthen the respiratory muscles.
4. Breathing exercises. An easy one can be done by sitting or standing and raising one arm over the head, inhale through the nose, hold for 5 seconds (longer if possible) and exhale through pursed lips (puckered), do this several times, then repeat with other arm. If holding the arm in this position is difficult, it can rest on the head, on the back of a chair, etc. This stretches the muscles down your side allowing your lungs to expand easier.
5. Eat small, healthy meals.

Here are some additional suggestions on making COPD more manageable for everyone.

- The COPD patient can be trying: ex; the typical COPD patient says, "This is the worse place I have ever been, the worse food I have ever eaten, you are the worse person to ever stand in front of me". It is important to remember this is the disease talking. DO NOT take it personally.
- It is difficult for a COPD patient to lie flat. Gravity is pulling down on their chest therefore; they have to work harder to move the weight to open their lungs. They prefer to sit up leaning forward most of the time.
- When experiencing breathing difficulties, a fan blowing air in their face can provide relief. You will be amazed.
- A hot beverage helps relax the airway.

For additional information, contact your respiratory therapist.