



PEARL



The Pancreas Education and Research Letter

New Breakthroughs Help Chronic Pain in Pancreatitis

Volume Six
Number Two
Winter 2012

PEARL is a
publication of the
Pancreatic Studies Office in the
Division of Gastroenterology,
Hepatology and Nutrition
at the University of Pittsburgh

Editors

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A team of researchers led by Gastroenterology Fellow, **Bridger Clarke, MD**, at the University of Pittsburgh Medical Center are exploring new and better ways of treating patients who have painful chronic pancreatitis. A recent study currently in press in the *Journal of Clinical Gastroenterology and Hepatology*, funded by the NIH, the National Pancreas Foundation and private donors, showed that endoscopic therapies can successfully reduce pain in more than half of patients with painful chronic pancreatitis. When endoscopic intervention is unsuccessful, surgery can reduce pain symptoms in an additional 50% of patients.

Chronic pancreatitis can cause side effects such as pain, which can limit people's quality of life and physical activities. For patients with such health problems, doctors offer specific treatments, outside of pain medication, to relieve such pain. Few studies to date have explored the long term outcomes of endoscopic therapy (ERCP) versus surgical interventions. Doctors at the University of Pittsburgh evaluated outcomes over nearly five years of follow up time for patients with chronic pancreatitis who had either medical, endoscopic, or surgical therapies. Dr. Clarke found that a shorter duration of disease was linked with a better outcome of endoscopic treatment.

This study helps to provide guidelines and recommendations for the treatment of patients who have chronic pancreatitis and gives hope to those who are living with chronic pain. The goal is to provide a safe and effective long term treatment for these patients so they can live healthy, productive lives. ○



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Dr. Clarke attended the University of Virginia for his undergraduate and medical schooling, followed by an internal medicine residency at the University of North Carolina before coming to the University of Pittsburgh for GI fellowship. Dr. Clarke's interest in studying diseases of the pancreas began in medical school when he was involved in a project evaluating the use of new covered metal stents for treatment of biliary strictures related to acute and chronic pancreatitis. His research interests include endoscopic treatments for diseases of the pancreas and biliary system. Currently Dr. Clarke is working on a project evaluating whether endoscopic treatments can help patients with recurrent acute pancreatitis.

On the Internet:
www.pancreas.org

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What Is Diabetes?

If I Have Pancreatitis, Could I Get Diabetes?

By Melena Bellin, MD

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Our pancreas helps us turn the food we eat into fuel. Most of the pancreas makes digestive enzymes that break down the food in our gut into nutrients we can absorb. This part is called the exocrine pancreas. Scattered throughout the exocrine pancreas are little clusters of cells called the islets of Langerhans. The islets (pronounced eye-lits) release a hormone called insulin into our blood when we eat. Insulin signals our muscles and other cells to take up sugar from the blood and use it for fuel. This is very important for energy and for growth.

Diabetes is a disease where the body cannot use sugar (also called glucose) for fuel. Without treatment, kids or adults with diabetes have high levels of sugar in the



blood, and they may feel very tired, weak, or lose weight because their body cannot use the food they eat for energy and growth. Most kids with diabetes have what is called type 1 diabetes. In type 1 diabetes, the immune system, which is supposed to protect us from infection, gets confused, and attacks the part of the pancreas that makes insulin. Because type 1 diabetics cannot make their own insulin, they must always take insulin shots, or wear an insulin pump. About one in every 500 children has type 1 diabetes. Many adults have type 2 diabetes. In type 2 diabetes, people make some insulin, but the body is not very responsive to the signal from the insulin and can't use the sugar in the blood well, even though some insulin is around. Patients with type 2 diabetes are often overweight, and diabetes is treated with weight loss, pills, or insulin injections.

continued on page 3

Balsamic Chicken with Pears

By Julia Greer, MD, MPH

Assistant Professor
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This is a wonderful way to prepare chicken with a rich and unique flavor. The red onion and cherries provide some valuable anti-oxidant nutrients and the pears contain fiber and vitamin C.

Ingredients:

- 6 skinless and boneless chicken breasts (about 3 to 4 ounces each)
- Salt and freshly ground black pepper
- 1 tablespoon extra-virgin olive oil
- 1/4 cup red onion, minced
- 2 medium Bosc or Bartlett pears, peeled, cored, and sliced
- 1 cup low-sodium chicken broth or stock
- 1/4 cup balsamic vinegar
- 1 tablespoon plus 1 teaspoon sugar
- 2 teaspoons cornstarch
- 1/4 cup dried tart cherries

Preparation: Pat chicken dry with paper towels. Place each chicken breast between two sheets of plastic wrap. Using a meat mallet, carefully pound chicken breasts to a uniform thickness of about 1/2 inch. Season both sides

with salt and pepper. Heat olive oil in a large nonstick skillet over medium heat; add chicken and sauté, turning once, 3 to 4 minutes on each side, until golden brown. Remove from heat and transfer to a platter; cover and keep warm. To same pan, add onion and sauté over medium-high heat 2 minutes or until soft; decrease heat to medium and add pears. Continue sautéing, stirring occasionally, 3 to 4 minutes, until pears are soft and golden brown. To prepare sauce, combine chicken broth, balsamic vinegar, sugar, and cornstarch in a small bowl. Pour over pear mixture and add cherries. Increase heat to high and simmer, stirring frequently, 6 to 8 minutes or until sauce thickens slightly. Return chicken and any juices to pan. Bring mixture back to a simmer and decrease heat to medium. Cook 10 minutes or until a meat thermometer registers an internal temperature of 165° F (juices will run clear when cut with the tip of a knife). Taste and adjust seasonings if necessary. Remove chicken from heat and place on individual serving plates or on a large platter. Using a slotted spoon, mound fruit over top. Spoon sauce over fruit and around chicken. Serve immediately. Makes 6 servings. ○

Nutritional information per serving:

Calories: 210	Fat: 4 g
Saturated fat: < 1 g	Carbohydrate: 21 g
Total sugars: 14 g	Protein: 23 g
Sodium: 135 mg	Cholesterol: 55 mg
Dietary fiber: 2 g	

FRAMES Trial:

Researchers Lead Multicenter Study of Endoscopic Therapy in Pancreas Divisum

By Joseph Romagnuolo, MD, MSc, FRCPC, FASGE, FACG
Associate Professor of Medicine in the Division of Gastroenterology and Hepatology, Medical University of South Carolina

Funded by a generous NIH R21 grant, our team at the Medical University of South Carolina (MUSC), including Manager/Monitor Kyle Orrell and Coordinator Stephanie Warth, is taking great leaps towards definitively settling the controversy of whether or not using endoscopic retrograde cholangiopancreatography (ERCP) improves pancreas function in patients born with pancreas divisum and have pancreatitis. They are investigating whether it reduces the chance of future pancreatitis or not, and whether it's worth the risks.

In pancreas divisum, the front (ventral) and back (dorsal) parts of the pancreas have failed to fuse during



Dr. Romagnuolo

fetal development, leaving two duct drainage systems, one of which is sometimes small in comparison to the amount of pancreas it has to drain. No randomized data exists to prove that cutting (sphincterotomy) the drainage opening, to make it bigger, in these patients is helpful. ERCP always has risks, including causing post-procedural pancreatitis, but non-randomized studies suggest ERCP might cut the risk of future pancreatitis by more than half. The balance of risks and benefits is therefore not known. Since divisum affects 5-10% of the population, and since unexplained acute pancreatitis is an important health problem, this research is important. The researchers have already recruited 75% of their study subjects and are planning a multicenter randomized trial. Results to come soon!

Current enrolling centers include MUSC, Indiana University, Dallas, University of Minnesota and University of Alabama, Birmingham. Several other centers including the University of Pittsburgh have expressed interest in the upcoming randomized trial, which will be called **FRAMES** – Frequency of Recurrent Acute pancreatitis after Minor papilla Endoscopic Sphincterotomy. For more information go to: <http://ddresearch.musc.edu/>

Stay tuned to the **PEaRL** for more information about future research opportunities for patients with pancreas divisum. ○



Kids' Corner *continued from page 2*

More rarely, diabetes is caused by pancreatitis. When someone has pancreatitis for a long time, the entire pancreas is injured by inflammation, and this can damage the islets too. Then the islets do not release enough insulin.

This does not usually happen until someone has had pancreatitis for many years, so it is much more common in adults than kids. Once in a while, a child with pancreatitis may also get diabetes. Sometimes, when the pancreatitis is very bad but the islets are still working, doctors may recommend a major surgery in which the pancreas is removed (called pancreatectomy) and the islets only are put into the liver (called an islet autotransplant). The part of the pancreas that makes the digestive enzymes is thrown away. Kids who have an islet autotransplant need to take insulin for a while after surgery, but they can stop taking insulin about half of the time. They must take digestive enzyme pills with their meals. This is



only done if the pancreatitis is bad enough that it is worth risking diabetes in order to get rid of the pancreatitis.

If you are a kid and you have diabetes, it is important to know that you did not do anything wrong or bad to get diabetes. If you have diabetes, your doctor will ask you to check your blood sugar at home. Your doctor will prescribe insulin or other medications to treat diabetes, but diabetes shouldn't keep you from living your life.

Kids with diabetes go to school, play sports, go to camp, and do other fun activities with their friends. There are professional athletes, actors, scientists, and many others with diabetes. You probably have met someone with diabetes and may not even know it!

What is being done about this? A lot!

Many groups of doctors and scientists are working all the time to help treat and prevent both pancreatitis and diabetes. **PEaRL** is written to let you know some of the advances.

If you have any questions, please send a letter, email, or call us at 888-PITT-DNA. ○

CONGRATULATIONS

Randall Brand, MD, director of UPMC's Gastroenterology Malignancy Early Detection, Diagnosis and Prevention Program and a pancreatic cancer expert, will be the 2011 recipient of the national *Hirshberg Foundation for Pancreatic Cancer Research's* First Annual Moore Memorial Award. The award will be presented on Nov. 19 during the Second Annual Purple Palooza Gala in Steubenville, Ohio, which raises money for pancreatic cancer research.

According to Agi Hirshberg, president and founder of the Hirshberg Foundation for Pancreatic Cancer Research, this award represents the foundation's passionate commitment to finding a cure for pancreatic cancer.

"Dr. Brand is unparalleled in his commitment to finding answers to the many questions pancreatic cancer asks," said Ms. Hirshberg. "This award is in memory of the late Ken Moore, a friend of our foundation who fought every day to win his battle against pancreatic cancer. He passed away on November 6 of last year after dedicating the time after his diagnosis to raising money for pancreatic cancer research."

Dr. Brand's research studies focus on the early detection of pancreatic cancer and pancreaticobiliary disorders. He specializes in the care of individuals at high risk for developing the disease.

Catherine Moore, organizer of the Purple Palooza, added "With the help of some close friends, my dad and I organized the first Purple Palooza event last November. Creating the event was a way for us to combat the feeling of powerlessness we experienced in the face of my father's pancreatic cancer diagnosis. Sadly, he passed away days before the event was held but it is his memory, as well as the memory of so many loved ones lost to this disease, that inspire our goal of funding pancreatic cancer research." ○



Dr. Brand

Winter 2012

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