May 2011

LOURDES HEALTH SYSTEM

Lourdes HealthViews

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Lourdes Health System
1600 Haddon Avenue Camden, NJ 08103
www.lourdesnet.org
1-888-LOURDES (1-888-568-7337)

Director of Marketing and Media Relations:
Carol Lynn Daly
Publications Editor: Josh Bernstein

Lourdes Health Views is intended to provide physicians with news and information that will assist them in their everyday practice. Please direct any comments or suggestions to our Writer/ Editor at the above address or to: bernsteinj@lourdesnet.org.

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Photo: A.D.A.M.

Patients infected with hepatitis C develop liver cirrhosis (left), decompensated liver disease and cancer. It is critical to treat these patients early to prevent liver failure and hepatocellular carincoma.

Comprehensive Care for Patients with Liver Disease

Liver Transplantation Survival Rates Exceed National Averages

An estimated 4.5 million people are infected with chronic viral hepatitis.[1] These patients require careful management, as these infections can easily progress to cirrhosis and liver cancer. If damage to the liver cannot be controlled, an organ transplant often is necessary.

Lourdes Health System's Southern New Jersey Center for Liver Disease works in conjunction with the nationally recognized Lourdes Regional Organ Transplantation Center to provide individualized care to patients with hepatitis C, hepatitis B, alcohol liver disease, the emerging epidemic of non-alcoholic steatohepatitis, primary biliary cirrhosis, sclerosing cholangitis and auto-immune hepatitis, as well as other metabolic liver and genetic liver diseases.

Lourdes is the only facility in South Jersey licensed to perform liver transplants and has outcomes that far exceed national averages.

"Hepatitis C is the most common cause of liver transplants. The majority of the population infected with hepatitis C was infected during the 1960s, '70s and '80s and many are now developing liver cirrhosis, decompensated liver disease and liver cancer. It is critical to identify and treat these patients early to prevent liver failure and hepatocellular carcinoma," said **Hisham ElGenaidi, MD,** Lourdes Health System medical director of hepatology.

"This population may require liver transplantation. To prevent this from happening, it is imperative we identify the population at risk for hepatitis C and begin treatment when the patients are diagnosed. New treatment options with direct-acting antivirals will become available later this year and they will offer hope for both the naïve-to-treatment patients and patients whose previous treatment failed."

[1]Centers for Disease Control and Preventon. Surveillance for Acute Viral Hepatitis—United States 2007. Atlanta, Ga: Centers for Disease Control and Prevention, U.S. Dept. of Health and Human Services; 2009:58(SS-3).

From Management to Transplant

The Southern New Jersey Center for Liver Disease typically receives referrals from gastrointestinal and internal medicine specialists for:

- liver cirrhosis;
- liver cancer;
- ascites;
- hepatic encephalopathy;
- variceal bleeding;
- hyponatremia secondary to liver cirrhosis;
- history of these conditions.

Patients are evaluated by a hepatologist for a liver transplantation. The patient's Model of End-Stage Liver Disease (MELD) score is calculated using his or her total bilirubin, INR and creatinine levels. This score estimates the patient's three-month survival rate and determines his or her place on the transplant waiting list. A normal score is 6. A minimum score of 15 is required for a patient to receive a liver transplantation as required by the United Network for Organ Sharing (UNOS). Exceptions to the calculated MELD score are possible for certain disease states such as hepato-cellular carcinoma (if within the UNOS accepted criteria, the patient receives 22 MELD points) and hepato-pulmonary syndrome (18 MELD exception points), as well as other factors that may affect survivability or quality of life.

All hepatitis C patients attend an education class to learn about their treatment (interferon and ribavirin) and potential side effects, as well as possible lifestyle changes. A dedicated physician's

assistant manages the hepatitis C patients with the physicians, and together they provide an experienced individual treatment approach geared towards the patient's response to treatment and its side effects.

Liver cancer is managed using a multidisciplinary approach. Liver tumors are reviewed at a hepatobiliary tumor board conference that involves the expert input of hepatology, oncology, interventional radiology and liver transplant surgery. Many liver cancers, if diagnosed early, can be treated successfully. Treatment options available at Lourdes include transarterial chemoembolization, radiofrequency ablation, percutaneous alcohol ablation, chemotherapy, tumor resection and organ transplant.

While waiting for transplant, all liver disease patients' symptoms are medically managed to provide the best quality of life possible.

Earlier Transplantation Opportunity

Rules governing organ donation and listing services allow patients to be listed with multiple transplant centers as long as they are affiliated with different procurement organizations. Because of this, patients can be listed at Our Lady of Lourdes Medical Center, which is served by the New Jersey Sharing Network, and the Philadelphia hospitals that belong to a different procurement organization.

"MELD scores range from 6 (less ill) to 40 (gravely ill) and can change over time. MELD scores for patients undergoing a liver transplant at Lourdes are typically lower than at nearby Philadelphia hospitals. This is because there is only one other hospital in the New Jersey Sharing Network competing for livers, while eastern Pennsylvania's organization has a half dozen hospitals," said Dr. ElGenaidi.

When an organ becomes available, the Lourdes liver team stands ready to receive or procure it 24/7, 365 days a year.

Successful Outcomes

Our Lady of Lourdes Medical Center is one of only two facilities in the state licensed to perform liver transplants. The Liver Transplant Program at Lourdes has a one-year patient survival rate of 95.45 percent and a three-year survival rate of 81.82 percent, compared to the national rates of 85.30 percent and 74.10 percent, respectively, according to Scientific Registry of Transplant Recipients.

This success is due to the large team that cares for the patient perioperatively and postoperatively, including transplant surgeons, hepatologists, psychiatrists, intensivists, radiologists, critical-care nurses, transplant coordinators, social workers and physical therapists.

For the first three months post-op, the patient is primarily managed by the transplant surgeon in collaboration with hepatology. The hepatologist resumes primary care thereafter, with focus on:

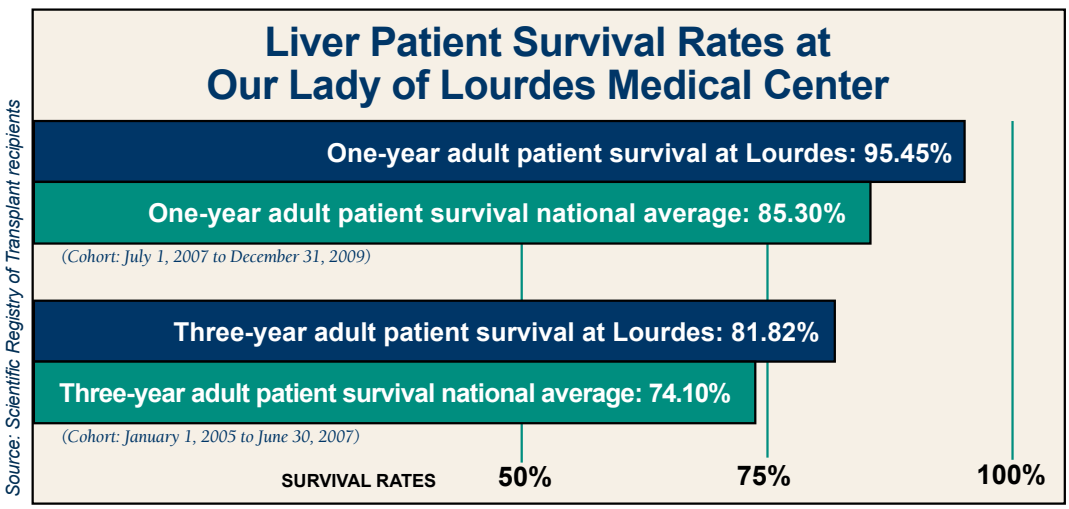
- immune system suppression management;
- management of post-surgery diabetes;
- hepatitis C recurrence;
- hyperlipidemia;
- hypertension;
- cardiovascular disease.

"Our attention to cardiovascular care sets us apart, as heart disease is a main cause of mortality in liver transplant patients," noted Dr. ElGenaidi. "All transplant patients receive an annual cardiac stress test and other measures."

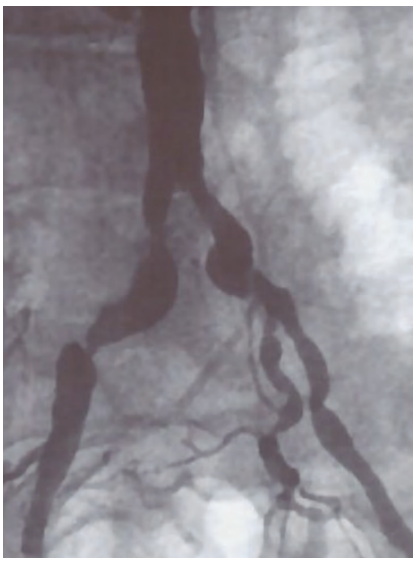
In addition, all patients receive a yearly skin cancer screening with a dermatologist.

"Our management is highly individualized. We have a very close relationship with all of our patients," he said.

CONTACT
To refer a patient to the Southern New Jersey Center for Liver Disease, call 856-796-9340.



Images courtesy Vijay Verma, MD



Lower-body PAD sometimes begins at the bifurcation of the aorta. Angiographic image shows iliac artery before (left) and after angioplasty and stenting for occlusive disease.

At Work Against PAD: *Exercise, Medications, Endovascular Interventions*

Peripheral arterial disease (PAD)—widely underdiagnosed like vascular disease in general—needs more widespread treatment and is a more significant factor in patients developing chronic wounds than many physicians are aware. Normally associated with claudication, numbness in feet and hands and coldness in extremities, peripheral vascular disease is also a marker for mortality risk.

Additionally, PAD leads to suffering in patients in whom it is not recognized before leading to external tissue lesions (resistant to healing and refractory to treatment) and frequently to amputation.

"But up to half of patients with PAD have no symptoms," said Lourdes interventional cardiologist **Vijay Verma, MD.** "If the disease can't be caught at this stage, the goal is to at least treat it once claudication occurs, before the patient gets more serious limb disease."

Easy to Screen

Most patients with peripheral artery disease have polyvascular disease, including cardiovascular disease or cerebrovascular disease, or both. The presence and severity of PAD is a major predictor of mortality. PAD is not usually the cause of death, but failure to treat it adequately reduces a patient's overall chance of all-cause survival.

"If a patient has risk factors, assessment can be a wise step, and certainly if there are any signs, it's important to evaluate at the first indications," explained Dr. Verma, a member of Cardiovascular Associates of the Delaware Valley. "Definitely if a wound is the sign, even as early as grade 2, the doctor should examine the patient's lower-limb pulses and listen for bruits."

Measuring ankle-brachial index (ABI) is also easy to do in the office. Yet, physicians often fail to perform the test, even though lower scores correlate with functional disability from PAD. An abnormal ABI should lead to more detailed evaluation, through:

- exercise testing;
- ultrasound, the most commonly used imaging test;
- or angiography, including CT angiography or MR angiography (which avoids dye exposure).

Meds According to Severity

Some patients with complete occlusions have no symptoms. In these cases, smaller, collaterals vessels have compensated by expanding and picking up additional blood flow.

"Exercise does wonders to increase this lateral circulation," said Dr. Verma. "It's important to get patients to try to walk through their claudication, including with a specific treadmill program."

Medical therapy should go beyond blood-lipid reduction to reducing inflammation and clotting. Low-dose statins can help combat the inflammatory process, improve exercise tolerance and reduce risk of stroke—and for these reasons are sometimes initiated with a larger dose.

But anti-platelet therapy is of utmost importance. The simplest step is for patients to take low-dose aspirin, but clopidogrel provides a stronger benefit, and is especially indicated for patients on the diabetic continuum. "Patients at high risk for clots benefit from taking both aspirin and clopidogrel," said Dr. Verma.

To further address symptoms, clinicians have used pentoxifylline to reduce platelet aggregation and thus reduce blood viscosity. However, efficacy (as measured by mean walking distance) is better with cilostazol, which also vasodilates and improves lipid profile.[1, 2]

[1] Radack K, Wyderski RJ. Conservative management of intermittent claudication. Ann Intern Med 1990; 113:135-46.

[2] Pletal® (cilostazol) Prescribing Information.

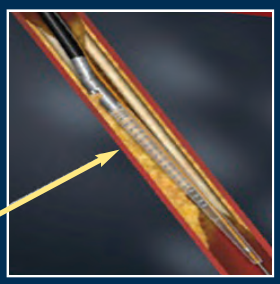
Superficial Femoral Artery Revascularization

Stents improve long-term potency with new designs/materials

- self expanding
- nitinol
- drug elution

New technologies

- antherectomy
- laser
- drug eluting balloons



Revascularize as Needed

The many patients with stable, manageable claudication may not need invasive treatment. But revascularization may be indicated for those who have not responded to therapy and is automatically indicated for those who demonstrate at least one of these conditions:

- gangrene;
- non-healing ulcers;
- ischemic rest pain;
- claudication causing significant lifestyle deterioration.

Endovascular surgery for PAD (peripheral endarterectomy or bypass) has a history of success, but catheter-based interventional treatment has garnered comparable achievements:

- a similar marked decrease in morbidity and mortality;
- reduced hospital stay and recovery time compared with surgery;
- the advantages that come with newer techniques. *(See box above)*

"Previously, stents haven't worked quite as well in the lower limbs, but new devices are helping a great deal," said Dr. Verma, who like other cardiac interventionalists in this treatment role serves as a general endovascular specialist applying decades of angioplasty experience to this overlapping vascular-disease population.

The interventional option is also a boon for patients who are not good candidates for surgery. The specialists can treat occlusive disease in the aortoiliac artery *(See image page 4)*, femoral artery or smaller arteries in the lower leg. But the interventions must be done with skill and experience because of danger of vessel injury. Success rates are very high, with most patients showing multi-year benefits and patency.

The vascular team can use catheter-based interventions in combination with exercise, medical or surgical treatment. Dr. Verma noted that monitoring and testing should continue after intervention.

CONTACT
To reach Lourdes' cardiovascular and interventional services, call 1-888-LOURDES (1-888-568-7337).

Who Gets PAD? And Related Wounds? Who Gets It Again?

Patients are often ill-informed about peripheral artery disease, and may blame leg cramping and fatigue simply on age and conditioning. PAD is indeed a condition of middle-aged and older people. An estimated half of people in their 80s suffer from PAD.

Those who are diabetic or pre-diabetic are at particular risk, and those who have smoked for more than 10 years may have permanent, significant epithelial damage that predisposes to PAD. Modest risk factors also include hyperlipidemia, hypertension and homocysteinemia.

"Anyone who has had a stenosis is also at risk for restenosis," noted Dr. Verma. "And patients who exacerbate their risks—say, by not exercising, by continuing to smoke or by not taking their medications—will almost surely restenose."

Endovascular interventionalists would prefer to treat lesions early before they are complete. The good news, though, is that patency after a second intervention tends to be even more durable than that after the first treatment.

Not surprisingly, the more extensive are the signs and evidence of atherosclerotic disease, the more likely the patient will develop intransigent wounds. And, statistically, wounds in the presence of PAD signal major risk for amputation, especially if the latest aggressive care is not applied.

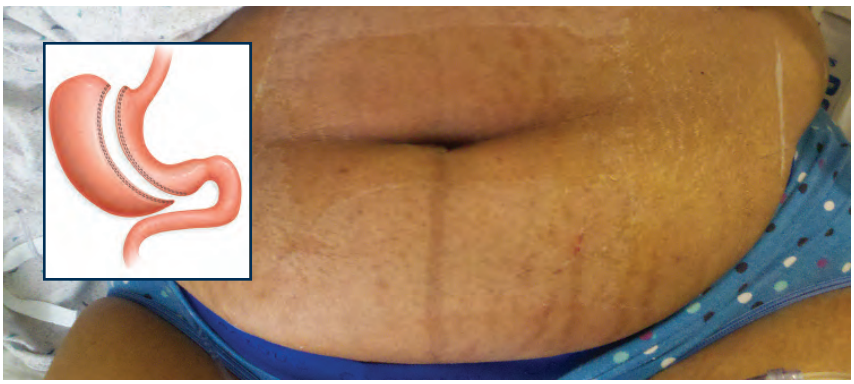


Photo courtesy Alex Gandsas, MD

Single-Port Surgery Benefits Weight-Loss Patients

Laparoscopic procedures have reduced complications, blood loss and pain, as well as shortened hospital stays and recovery time. Traditional laparoscopic surgery utilizes three-to-six small incisions for insertion of a laparoscope and instruments.

Another approach to laparoscopic surgery, performed at only a handful of centers across the country, calls for only a single port in the patient's navel. As a result, there is little-to no scarring and patients report less discomfort and faster recovery compared to traditional laparoscopy.

Alex Gandsas, MD, FACS, chair of the department of surgery at the UMDNJ School of Osteopathic Medicine, performed the first single-port bariatric sleeve gastrectomy in New Jersey earlier this year at Our Lady of Lourdes Medical Center.

"This is a remarkable step toward improving the cosmetic results for patients," said Dr. Gandsas. "The belly button is the body's natural scar. By reducing the operative site to one single incision in the belly button, the scar is practically invisible."

Greater Challenge

A sleeve gastrectomy removes 75 percent of the stomach so it resembles a shirtsleeve. Patients typically lose 55 to 65 percent of excess weight over three years and it is viewed as an alternative to gastric bypass because the intestines remain intact so malabsorption is not an issue.

Typically, a sleeve gastrectomy requires six ports and the surgeon triangulates out-side the patient. The single-incision approach is more challenging because the surgeon has less freedom of movement with all the instruments using the same entry point.

"The single-port technique is more challenging because your instruments are working in one line. The instrumentation is specially designed to articulate inside the patient, giving you the ability to bend, grasp and suture in multiple directions," Dr. Gandsas said. "With an experienced surgeon and appropriate patient selection, outcomes are excellent."

Patient Benefit

As with other laparoscopic procedures, the single-port approach offers patients the benefits of less pain, reduced blood loss and a faster return to normal activities compared to traditional open surgery.

While fewer incisions also can minimize discomfort and shorten healing time, many patients are attracted to being able to leave the hospital with only a Band-Aid.

"Patients appreciate the cosmetic benefit of a virtually scarless procedure," explained Dr. Gandsas, who also performed the first single-port sleeve gastrectomy in Maryland. "In my experience, patients want fewer incisions with any surgery."

Dr. Gandsas' patient, a 37-year-old probation officer from Gloucester County, tried numerous times to lose weight, including Weight Watchers, the Special K Diet—eating mostly breakfast cereal for two weeks—and seeking aid from a doctor. Prior to the surgery, she had a body mass index (BMI) of 40 and weighed 238 pounds.

The patient first considered a gastric band but elected the sleeve gastrectomy because it is more effective in promoting weight loss. She experienced little postoperative pain and was able to ambulate the day after surgery.

"I don't want to be overweight or underweight. I don't want to be a size two. I want to be a size healthy. I want to live a healthy lifestyle," she said.

Candidates

In general, patients eligible for traditional laparoscopy are appropriate for the single-port approach. Patients should have a BMI of 40 to 45 and an abdominal wall that allows inserted instruments to move freely.

"Single-port surgery itself is gaining popularity and many see a natural progression," said Dr. Gandsas. "We are moving toward fewer incisions to reduce surgical impact. However, we still need randomized prospective studies looking at comparable outcomes between single-port sleeve gastrectomy and standard laparoscopy. These minimally invasive techniques are a bridge as we push the envelope and refine our techniques to improve the patient experience."

CONTACT
To refer to a bariatric surgeon at Lourdes, call 1-888-LOURDES (1-888-568-7337) or visit www.lourdesnet.org.

Lourdes News

Lourdes Hospitals Participate in Pulmonary Function Study

Our Lady of Lourdes Medical Center and Lourdes Medical Center of Burlington County are participating in a one-year study to identify adults with alpha-1 antitrypsin (AAT) deficiency, a hereditary genetic disorder that can lead to the development of lung and/or liver disease.

A leading cause of early-onset emphysema, the condition is sometimes undiagnosed. However, recognition is important because effective treatments are available that differ from standard emphysema therapies.

"Once we know a person carries AAT deficiency, the recommendation for lifestyle changes includes smoking cessation, exercise and oxygen therapy. A pulmonologist may also recommend infusion therapy, continued surveillance or pulmonary rehabilitation," said **Gilbert Soto, CRT, MM,** director of Respiratory Care Services at Our Lady of Lourdes Medical Center.

Cause and Symptoms

AAT deficiency is caused by mutations in the SERPINA1 gene. Produced in the liver, the AAT protein normally protects the body from the enzyme neutrophil elastase. A deficiency or abnormality in AAT can allow neutrophil elastase to attack normal tissue, especially the lungs, and build up in the liver.

Initial symptoms of the deficiency include cough, sputum production and wheezing. Dyspnea eventually becomes the dominant symptom. It is estimated that 1 percent to 3 percent of chronic obstructive pulmonary disease (COPD) patients have the deficiency.[1]

Adults with severe deficiency may develop emphysema before age 40. Smoking increases the progression of emphysema. Patients also may develop chronic liver disease by their 50s.

Candidates

Candidates for the voluntary study at Lourdes are being identified through Lourdes' Pulmonary Function Testing (PFT) Laboratory. Participants must be between the ages of 18 and 75 and show significant obstructive disease during a physician-ordered pulmonary function test. A finger stick blood sample will test for AAT deficiency.

Testing is free for study participants. The study is sponsored by Temple Lung Center.

"If we find the deficiency, we can tell the patient there's a treatment to offer," said Lourdes pulmonologist **Thomas Nugent, MD**. "We're offering the screening as a public service."

"Because this condition is genetic, it benefits AAT carriers to be aware and so they can let relatives know as well," added Soto.

CONTACT
For more information or to refer a patient, call Pat Cosnett, PFT lab manager, at 856-757-3825.

[1] Fairman P, Malhotra R. Alpha-1 Antitrypsin Deficiency. emedicine.medscape.com. Accessed March 23, 2011.

Lourdes Honored for Supporting Military

Lourdes Health System has been honored for its dedicated service to military personnel at Joint Base McGuire-Dix-Lakehurst.

Employer Support of the Guard and Reserve (ESGR), a volunteer organization within the U.S. Department of Defense, presented Lourdes and Louise Poskus, manager of military affairs, with the My Boss is a Patriot Award. The award recognizes employers who provide outstanding support to their employees who are members of the National Guard or Reserve.

"Our motto is, *'It's an honor to serve all those who serve us'*," said Joanne Gianndrea, vice president of operations at Lourdes Medical Center of Burlington County. "It's engrained in our culture."

Lourdes Medical Center of Burlington County has provided healthcare services to the military since 2001. These services include pre- and post-deployment medical examinations and the Lourdes After-Hours Family Practice, which provides convenient primary care to active-duty military, their families and retirees nights, weekends and holidays. The after-hours practice is located adjacent to the Lourdes Emergency Department at Deborah Heart and Lung Center, only a few steps from the bases.

Appointments

Alan Pope, MD, has been appointed Lourdes Health System chief medical officer (CMO). He previously served as CMO for Our Lady of Lourdes Medical Center. In the new position, he will have responsibility for Our Lady of Lourdes Medical Center and Lourdes Medical Center of Burlington County.