

NewYork-Presbyterian Advances Gynecology

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Center Excels in Treatment of Rare Twin Syndrome

About 70 percent of developing identical twins share a placenta. Some 10 percent of these monozygotic twins go on to develop a rare and serious complication called twin-twin transfusion syndrome (TTTS), in which placental blood supply is shared unevenly, with one twin losing blood to the other. TTTS raises the risk of premature birth, serious illness for one or both twins, and possible loss of one or both twins. Left untreated, the risk of losing at least one twin with severe TTTS ranges from 70 to 90 percent.

The maternal-fetal medicine physicians in the Carmen and John Thain Center for Prenatal



Dr. Russell S. Miller

Pediatrics at NewYork-Presbyterian/Columbia University Irving Medical Center treat the highest volume of TTTS cases in New York City, and are one of a select group of centers in the country offering fetoscopic laser treatment for this disorder – flipping the statistics to a more favorable 80+ percent survival rate for one or both twins.

Although it can present any time in the second trimester or beyond, TTTS is typically diagnosed during weeks 18 to 22 of gestation. If ultrasound surveillance shows excess fluid (polyhydramnios) for one twin (the “recipient”) and decreased fluid (oligohydramnios) for the other (the “donor”), then a diagnosis of TTTS is confirmed and the health of the twins is further evaluated.

“Patients with monozygotic twins should undergo ultrasound screening beginning at about 16 weeks and continuing on an every-other-week basis,” explains **Russell S. Miller, MD**, maternal-fetal medicine specialist and Medical Director of the Center for Prenatal Pediatrics at NewYork-Presbyterian/Columbia.

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Heart Disease in Pregnancy and Postpartum Depression

Pregnant women considered to be high risk require the expertise of a collaborative maternal-fetal medicine team that brings together all of the healthcare providers needed to reduce the risk of complications and increase the chance of a healthy pregnancy and successful birth. NewYork-Presbyterian/Weill Cornell Medical Center’s Department of Obstetrics and Gynecology cares for a high number of older pregnant women and others determined to be at high risk. The department has been expanding its

portfolio of maternal-fetal medicine services to meet their needs, including a specialized focus on obstetric cardiology and postpartum depression.

It’s an optimal blend of skills and expertise: *U.S. News & World Report* ranks NewYork-Presbyterian as the #4 hospital in the nation for Gynecology, Cardiology and Heart Surgery, and Psychiatry in the latest “Best Hospitals” survey. Patients benefit from a personalized team that includes nationally recognized specialists from all of these fields.

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NewYork-Presbyterian
Gynecology
Ranks #4 in the Nation

Center Excels in Treatment of Rare Twin Syndrome (continued from page 1)

“Any time there is a difference in fluid between the twins, or really any ultrasound concern, we recommend referring the patient to a center like ours for a full evaluation and to discuss options, including possible treatment when TTTS is present.”

The Center’s team also includes **Lynn L. Simpson, MD**, Division Director of Maternal-Fetal Medicine at NewYork-Presbyterian/Columbia, **Chia-Ling Nhan-Chang, MD**, maternal-fetal medicine specialist, and clinical coordinator **Rosalie Ingrassia, RN, NP**.

If prenatal assessment reveals that therapy is indicated, the Maternal-Fetal Medicine team uses fetoscopic laser surgery to treat TTTS. Under epidural anesthesia in an operating room, the doctor inserts a fetoscope (similar to a long, thin laparoscope) into the recipient twin’s fluid sac within the uterus. The placenta can then be directly inspected, and abnormal blood vessels between the twins are visually mapped out. The physician then uses laser energy to coagulate blood within the abnormal vessels, thereby interrupting the transfusion of blood from one twin to the other.

Prior to the advent of fetoscopic laser, amniotic fluid volume reduction (otherwise known as amnioreduction) was the primary therapy for TTTS, but it is a temporary measure that does not cure the condition. Studies have shown that laser surgery is more effective than amnioreduction for improving twin survival and reducing the risk of neurologic disability. Fetoscopic laser treatment typically needs to be performed just once; a small subset of patients may need a repeat treatment in cases of recurrent or reversed transfusion.

In addition to over a decade of clinical experience with fetoscopic laser technology, the maternal-fetal medicine team at Columbia University is conducting ongoing research on TTTS and its treatment. NewYork-Presbyterian/Columbia is also a member of the North American Fetal Therapy Network (NAFTnet), a federally funded voluntary association of medical centers in the United States and Canada with established expertise in fetal surgery and other forms of multidisciplinary care for complex disorders of the fetus.

Pregnancies complicated by TTTS require close surveillance even after therapy and are at increased risk for premature delivery. Immediately after laser treatment, the Center for Prenatal Pediatrics team closely monitors the mother and her twins, with the ultimate goal to return her to the care of her referring obstetrician for the remainder of prenatal care through delivery. Says Dr. Miller, “We are so appreciative of every referral that we receive, and we respect that patients and their Ob/Gyns often have longstanding relationships. Our goal is to treat all patients to the best of our abilities, to interrupt the TTTS process, and to return them to their doctors’ care once things are heading in the right direction.”

For More Information

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Carmen and John Thain Center for Prenatal Pediatrics Celebrates a Decade of Care

The year 2020 will mark the 10th anniversary of the establishment of the Carmen and John Thain Center for Prenatal Pediatrics. The Center, which evolved from a concept of collaborative care initiated at Columbia in 2004, was created to bring together, in a single dedicated location, all of the specialists pregnant women and their families may need after a significant birth defect or genetic condition has been detected.

The Center for Prenatal Pediatrics team is guided by the principle that caring for babies with abnormalities starts before birth and continues into childhood, with neonatal and long-term pediatric follow-up.

Maternal-fetal medicine experts also work as part of The Mothers Center at NewYork-Presbyterian/Columbia, which is directed by maternal-fetal medicine physician **Leslie Moroz, MD**. This first-of-its-kind space, created in 2018, provides coordinated care to pregnant women with complications requiring specialized care. Specialists across various medical and surgical subspecialty areas collaborate to customize treatment plans to meet patients’ needs. Services include coordinating appointments with specialists, providing



counseling (including preconception counseling), and establishing a plan to manage care in the best way possible. The Mothers Center is the only such center in the country and serves as a national model for the care of medically and surgically complex pregnant women. The Mothers Center team is also conducting research to advance care and education to improve the health of women everywhere.

Appointments for The Mothers Center can be made by calling **1-844-MOM-CNTR (1-844-666-2687)**.

Heart Disease in Pregnancy and Postpartum Depression (continued from page 1)



Dr. Inna V. Landres

A Dedicated Obstetric Cardiology Program

According to the American College of Obstetricians and Gynecologists, heart disease is the leading contributor to maternal mortality – accounting for 26.5 percent of pregnancy-related deaths annually, with 23 percent attributed to peripartum cardiomyopathy. Recognizing the increased risk of heart disease during pregnancy, NewYork-Presbyterian/Weill Cornell established a multidisciplinary program that unites physicians from obstetrics, maternal-fetal medicine, cardiology, and obstetric anesthesiology along with obstetric nurses and others involved in the care of these patients. Led by **Inna V. Landres, MD**, Director of Obstetric Cardiology and a maternal-fetal medicine specialist, the group meets every month to discuss each patient and pool their input to customize a plan of care.

“Mothers with acquired or congenital cardiac disease have nearly 100 times higher mortality than pregnant women without cardiac disease,” explains Dr. Landres. Many patients in the program had heart disease before they became pregnant, such as those with congenital heart defects. Others had it but did not know until they began prenatal care when testing discovered a problem. Still others had no heart disease previously but developed peripartum cardiomyopathy while pregnant.

Early on, signs and symptoms of cardiac disease in pregnancy may mimic those of common pregnancy issues, such as swelling in the legs and feet or shortness of breath. These symptoms are not uncommon as pregnancy progresses but may also be indicators of congestive heart failure. High blood pressure or periodic headaches may be normal for one patient but indicate an elevated risk of preeclampsia in another. “The physiologic changes of pregnancy, including increased blood volume and vascular stress, can stress the heart and exacerbate any preexisting cardiac conditions – especially moving into the second trimester and onward to delivery,” says **Harsimran S. Singh, MD, MSc**, Co-Director of Obstetric Cardiology and Director of Adult Congenital Heart Disease.

“It is important to know what each patient’s baseline is so we can determine when intervention is needed,” Dr. Landres adds. “Our team outlines everything there is to know about how to care for a patient, including medications, mode of delivery, cardiac monitoring, emergency contingency plans, and postpartum care. The plan becomes part of each patient’s electronic medical record, so it is readily available to any team member caring for her.”

Interventions may include ensuring patients take their medications as prescribed, modify certain activities, and see their cardiologists more frequently during pregnancy. The majority of patients with heart disease can deliver vaginally. During labor, Dr. Landres and the team use telemetry for monitoring and may recommend an early epidural for pain control and to prevent a rise in maternal heart rate. In rare cases, cardiac-assisted delivery is performed to facilitate delivery through the use of forceps or vacuum assistance.

Dr. Landres and the team are seeing more patients with heart disease before they become pregnant. “We encourage preconception counseling to optimize patients’ health and make sure they are aware of any potential risks before pregnancy,” she says.



Dr. Harsimran S. Singh

“Women with cardiac disease can have an increased risk of complications during and after pregnancy. The goal of our multidisciplinary approach to their care is to help mitigate that risk,” concludes Dr. Singh. “This program is a great example of how different specialties can break down academic silos, all in pursuit of optimizing the health of our patients. We learn a lot from each other from the discussions and are able to formulate evidence-based and collaborative care plans. As a result, patients benefit.”

The obstetric cardiology program at NewYork-Presbyterian/Weill Cornell has a patient coordinator to help schedule appointments, including coordinating obstetric and cardiology appointments for the same day. To refer a patient, contact (212) 746-3266.

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Heart Disease in Pregnancy and Postpartum Depression (continued from page 3)

Universal Screening for Postpartum Depression

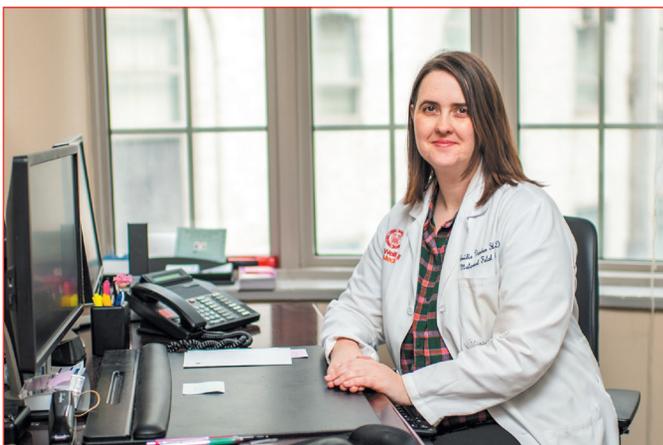
Postpartum depression is a common postnatal issue, occurring in approximately 9-10 percent of women postpartum. Women with a history of depression or anxiety, those with chronic medical conditions, and those carrying fetuses with congenital anomalies are at increased risk of depression and anxiety during and after pregnancy. Untreated postpartum depression can lead to adverse consequences for both mother and baby. Identifying and treating affected women is therefore doubly important.

With leadership by maternal-fetal medicine specialist **Emilie L. Vander Haar, MD**, the team at NewYork-Presbyterian/Weill Cornell is working to implement a universal tool to identify a patient's risk of postpartum depression early, so

intervention can begin sooner. "Screening currently varies from provider to provider. We want to develop a consistent screening program so patients at risk for postpartum depression can be diagnosed sooner and linked to our psychiatry providers as needed," Dr. Vander Haar explains.

Many women who are taking medications for depression or anxiety and then become pregnant believe they have to go off of their medications during pregnancy, further raising their anxiety or deepening their depression. The maternal-fetal medicine team initiates a discussion with each patient and her psychiatrist to identify the most appropriate medication to control her symptoms during pregnancy. "For these patients, the benefits of taking a psychiatric medication during pregnancy far outweigh the risks," says Dr. Vander Haar.

Obstetric team members throughout NewYork-Presbyterian/Weill Cornell are collaborating to devise a screening program that would be accessed and used by providers at all NewYork-Presbyterian campuses and obstetric practices via the electronic medical record system. Says Dr. Vander Haar, "My hope is that we can also use this as a research tool to better understand postpartum depression, identify patients early, and treat them as quickly as possible."



Dr. Emilie L. Vander Haar

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