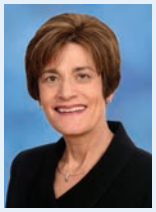
Inova L.J. Murphy Children's Hospital

Fetal Care Center UPDATES

Summer 2021

A Note from the Medical Director



Margot Ahronovich, MD

Greetings from the fetal care team. As we are all becoming immunized, we are seeing some return to normalcy. There were some positive changes and lessons learned from this pandemic, particularly for the medical world. We have streamlined our family meetings by utilizing technology. We have become very experienced at doing remote meetings. This gives providers and family members the ability to attend conferences from their homes and/or their offices. We have been able to effectively gather entire teams to meet at the same time. This has been fabulous for complete communication with the entire care team.

If your patient has a fetal complexity that requires family support, please feel free to reach out to our wonderful team. We are happy to partner with you to help support these families through a difficult period during the pregnancy and delivery. You will be invited to join us for team meetings as well as any presentation of the case at multispecialty fetal care rounds, which occur on a bimonthly basis. Meetings are both in person and virtual through a secure website and are a CME event.

Feel free to reach out to any of us:

703.776.6371

fetalcare@inova.org

inovachildrens.org/fetalcare

Pediatric Surgery

Joseph Hartwich, MD, FACS, FAAP

The Pediatric Surgical Group practices exclusively at Inova L.J. Murphy Children's Hospital. Our group of board-certified pediatric surgeons work in close concert with the rest of the fetal care team to provide prenatal counseling to expecting parents and advanced care throughout an infant's initial hospitalization and beyond. The vertical integration of services on the Inova Fairfax Medical Campus provides rapid and seamless transport from the delivery room to the NICU and to the operating room, if needed. By maintaining a team approach with the maternal-fetal medicine specialists, neonatologists and pediatric anesthesiologists at Inova L.J. Murphy Children's Hospital, the Pediatric Surgical Group can provide the most advanced and least invasive surgical care to Northern Virginia's youngest patients.

While there are many of congenital defects that fall under the care of pediatric surgeons, gastroschisis is a disorder that is relatively common and of increasing incidence. The incidence of gastroschisis in the United States increased from 2.3 to 4.4 per 10,000 live births between 1995 and 2005. There are a multitude of predisposing risk factors, but the strongest appears to be young maternal age. Prenatal diagnosis is most typical in the U.S. and is noted by an elevated maternal serum AFP and bowel or viscera within the uterine cavity on ultrasound. Unlike omphalocele, the abdominal contents in gastroschisis are not covered by an amnion. These fetuses typically have some level of intrauterine growth restriction (IUGR) and have an average gestation age of 34 to 38 weeks.

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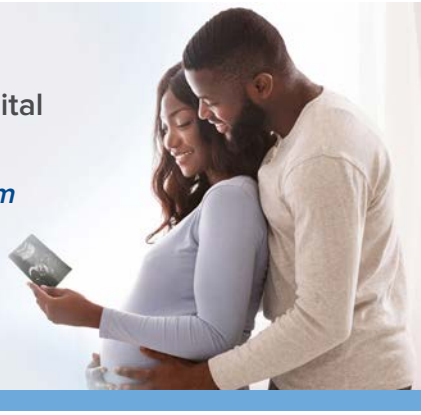
Learn more about
Inova L.J. Murphy Children's Hospital
Fetal Care Center

inovachildrens.org/fetal-care-program

Refer a patient:
703.776.6371



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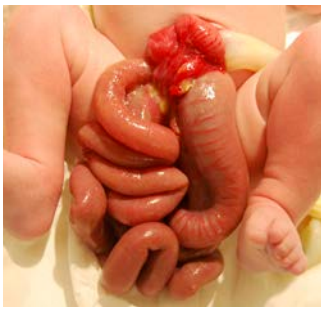
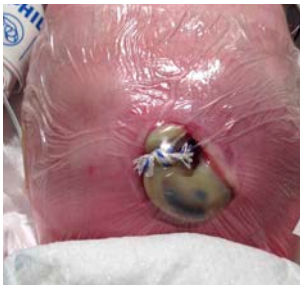
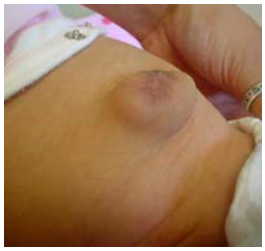
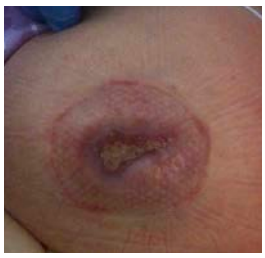
For infants with uncomplicated gastroschisis, survival with modern neonatal medicine is greater than 90 percent. Unfortunately, in developing countries with limited access to advanced neonatal intensive care, gastroschisis remains a condition with very low survival.



Vaginal delivery is preferred, unless there are obstetric contraindications or the fetus develops undue distress. After delivery, the entire lower half of the infant is placed in a plastic "bowel bag" to protect the hernia abdominal structures and conserve temperature. The abdominal defect is typically to the right of the umbilical cord. Depending on the size of the infant, the size of the defect and the amount of herniated contents, an attempt may be made at a primary closure of the defect shortly after birth. This can be done in the NICU once the infant has been stabilized and adequate respiratory support and IV access have been obtained. However, often owing to the small size of the infant, a Bentec spring silo is placed by the surgeon at the bedside to allow for a staged reduction and closure of the course of several days. This prevents respiratory complications and potential abdominal compartment syndrome due to the loss of abdominal domain.

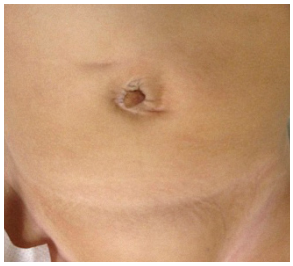






Previously, all abdominal wall closures were performed at the fascial (muscle) level by sutures in the operating room. In 2004, a "sutureless" technique was developed whereby the umbilical cord is left long and used as a plug to temporarily close the defect after the viscera have been reduced. The site is then covered with a dressing for a period of time, and the defect closes by secondary circumferential healing. Unlike previous "sutured" closure, which requires a trip to the operating room and general anesthesia, a sutureless closure can be performed at the bedside in the NICU with minimal to no sedation. Several multi-institutional studies have demonstrated that sutureless closure decreases infants' exposure to anesthesia, decreases ventilator time and decreases surgical site infections.

After reviewing this data, the Pediatric Surgical Group transitioned our practice and now preferentially utilize sutureless closure in infants with uncomplicated gastroschisis. Unlike a formal sutured repair, after closure these infants can be left with a small umbilical hernia which often closes spontaneously. If the hernia does not close spontaneously, the child can undergo a small outpatient procedure at age 4 or 5 for closure.



In addition to small size, infants with gastroschisis have significant intestinal dysmotility after closure. The etiology of this is unclear, but it can persist into childhood. The average length to full enteral feeds varies from three to six weeks after abdominal closure. The infant must be maintained on TPN during this time. During prenatal visits, the parents are counseled to expect a two-to-three-month NICU stay, and gastroschisis remains one of the congenital defects with the longest average length of NICU stay.

Gastroschisis can be complicated by intestinal atresias, perforation or necrosis. These infants often require advanced surgical care, with a possible delayed intestinal surgical repair four to six weeks after abdominal closure. Although uncommon, complex gastroschisis has a survival rate approaching 70 percent with appropriate neonatal and pediatric surgical care such as is available at Inova L.J. Murphy Children's Hospital.

After discharge, infants with gastroschisis can have ongoing issues with slow growth and dysmotility and are followed through early childhood by both the pediatric surgical team in concert with pediatric gastroenterology, nutrition and the patient's primary pediatrician.

Gastroschisis is one of the more common abdominal surgical disorders managed by the Fetal Care Center at Inova. We use a comprehensive approach, providing access for expecting parents to the neonatologists and pediatric surgeons in the prenatal period. These will be the physicians caring for their baby once born. By working closely together and with the other advanced pediatric subspecialists at Inova L.J. Murphy Children's Hospital, we have been able to achieve superior outcomes in this complex patient population.

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Ethics in Fetal Care

Inova's Center for Clinical and Organizational Ethics is comprised of our clinical ethics consult service (CECS) and the clinical ethics committees (CECs) at each Inova hospital. The CECS is staffed by full-time clinical ethicists and serves all Inova units and departments. The center promotes ethical thinking and contributes to the moral character of Inova. The following is a brief overview of clinical ethics consultation, beginning with why it is needed.

Questions about the best ethical course of action both *will* and *should* arise when providing and seeking high-quality modern healthcare. This is not a matter of someone doing something "wrong." The complexities and rapid development of modern medicine naturally give rise to these kinds of questions. In the search for better solutions to the medical problems mothers and babies face, medicine has to be innovative – but just because we can do something does not mean we *should*.

Sometimes, something as seemingly simple as a genetic test can raise issues about privacy, fairness or the burden of knowing something one may not want to know. Medical complexity or an unexpected diagnosis can make the correct course of action difficult to determine. Other times, there are disagreements about what to do that can't be easily resolved. Ethics consultation may be needed when a situation involves questions or disagreements about values, goals, decisions or decision-making ability. Most of the consults we do involve treatment decision making and goals of care.

The purpose of an ethics consult is to clarify and integrate the values of those involved, resolve conflicts, answer questions or provide support. Ethics is all about giving reasons, and ethics consults are advisory. The ethicist does not tell the team what to do, but rather provides the framework to analyze and resolve the dilemma or disagreement in a rational, systematic way. After reviewing the medical facts and patient's goals, the ethicist can help focus the discussion using an ethical rubric that allows the group to build consensus around a mutually acceptable and medically appropriate plan of care. One study found that 75 percent of team members said their confidence in the plan of care increased as a result of ethics consultation.[1]

Research has shown that ethics consultation may reduce the length of ICU hospital stays[2] and use of nonbeneficial treatments[3], but most importantly, both families and healthcare providers rate ethics consultation very favorably. Ethics debriefings, another intervention we offer, have been shown to provide significantly higher levels of comfort in team members caring for dying patients and increases team members' knowledge around ethical/legal issues.[4]

Ethics consults can take different forms. A "curbside" consult is a conversation either over the phone or in person. There may be a quick answer to the question, or the ethicist may recommend something more in depth. If a conversation is not enough to answer the question, the ethicist will gather more information by reviewing the medical record and speaking with team members to get a full sense of the situation. Depending on the issue, this may include meetings with the medical team, patient and family.

Clinical ethics consultation is available to all Inova team members, patients and families. Anyone can request an ethics consult: Inova team members can page the on-call ethicist at #384472; patients or families may ask any team member to do so for them. There is always an ethicist on call, and consults are available 24/7. The ethics team on the Inova Fairfax Medical Campus is comprised of Kelly Armstrong, Director of Ethics, and Stowe Teti, who joined Inova in September after leaving a faculty position at Harvard Medical School. Ours is a high-volume service that performs approximately 1,000 consults per year.

Stowe Teti

With the rapid pace of healthcare, there is often little time to consider requesting an ethics consult amid everything else going on. However, research has also shown that the sooner an ethics consult is requested, the better the outcome; we have found that for each week a consult request at Inova is delayed, its complexity increases by 16 percent. We encourage you to contact us if you have questions about a patient, your practice or our service.

Citations

[1] Wocal LD, Molnar E, Ott MA. Values, quality, and evaluation in ethics consultation. *AJOB Empirical Bioethics.* 2016;7(4):227-234.

[2] Au SS, Couillard P, Roze des Ordos A, Fiest KM, Lorenzetti DL, Jette N. Outcomes of ethics consultations in adult icus: a systematic review and meta-analysis. Critical Care Medicine. 2018 May;4695):799-808.

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[4] Rogers S, Babgi A, Gomez C. An educational intervention responding to the moral distress of NICU nurses provided by an ethics consultation team. Advances in Neonatal Care. 2008 Feb; 8(1):56-65.

Inova Children's Hospital Renamed

INOVA®
L.J. Murphy
Children's Hospital

Inova has received a transformational gift to its pediatric program from pediatrician Laurence J. Murphy, MD, who has served children and their families in Northern Virginia for more than four decades.

In recognition of Dr. Murphy's generous gift, Inova renamed the Inova Children's Hospital building on the Inova Fairfax Medical Campus. The facility will now be known as the Inova L.J. Murphy Children's Hospital.

As he nears retirement, Dr. Murphy and his wife Candace began to think of the legacy they wished to leave for their three daughters and the community he has cared for his entire career.

> ***"Inova has been a part of our family for more than 45 years"***
>
> – Laurence J. Murphy, MD, Inova Pediatrician and Philanthropist

"I've spent many days and nights caring for my patients at Inova. My children were born at Inova Fairfax Hospital, and my wife and I have received superb healthcare there over the years. We have benefitted from our affiliations with Inova during most of our lifetimes, and we are thrilled to be able to give back to my colleagues and the community in such a meaningful way."

Dr. Murphy is a board-certified pediatrician who has a longtime affiliation with Inova and currently serves as a member of the Inova Children's Hospital's medical staff. After completing his medical training at Georgetown University Medical School in 1977, Dr. Murphy began his residency at Children's National Medical Center. Upon the completion of his pediatric residency in June of 1980, he entered pediatric private practice in Burke, VA, and has continued practicing in Burke for the past 41 years. Today, Dr. Murphy continues to see his admitted pediatric patients at both Inova Children's and Inova Fair Oaks hospitals.

"We are incredibly grateful to Dr. Murphy and his family for this transformational gift to our pediatric program," said J. Stephen Jones, MD, MBA, FACS, President and CEO of Inova. "Their generous support will enable Inova to continue to provide our smallest patients with the highest quality specialized care. It will also help us recruit and retain talent, expand our research capabilities, and grow our award-winning child life program."

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