Infant Massage

Medical advances are improving the care of both full term and preterm infants in newborn intensive care nurseries. So why would anyone bother with infant massage? It is widely recognized that premature infants are being saved at younger and younger ages. These preterm infants often do remarkably well, but regardless, special care must be taken to foster their development. Full term infants with special needs also benefit from developmental intervention.

Massage dates back to at least 1800 BC. Hippocrates thought it was so central that he defined medicine as the art of rubbing. Cross-cultural studies have shown that in societies where infants are massaged, rocked and held, adults are less aggressive and violent. For some cultures massage is a medical treatment, for others it is simply their custom. In the U.S, the use of massage as a medical intervention declined in the 1940’s while antibiotics was introduced. Today, massage is gaining popularity again in both the traditional and complimentary medicine arenas.

Infant massage in particular has gained recognition recently and with good reason. Tiffany Field’s initial studies on preterm infants examined the effects of massage three times a day with moderate touch. Outcomes indicate a greater weight gain and improved regulation of state behavior as measured on the Brazelton Neonatal Behavior Assessment Scale. The infants were also hospitalized an average of six days less than those that did not receive any massage, with resultant financial benefits (Field, 1986). Another study showed increases in bone mineralization after a massage protocol with preterm infants (Moyer-Milleur et al., 1995). Recently, research shows that weight gain in preterm infants occurs specifically when massage is initiated at a weight of 900 to 1500 grams (Hernandez-Reif, 2001). The underlying mechanisms for these responses are still under investigation. Studies are currently underway to examine massage therapy effects on IGF-1, oxytocin and gastric motility.

Heidelise Als is another well-known researcher in the NICU setting. She studied the behavior of premature infants to qualify stress responses and calming skills. Additionally, Als developed various techniques for the practitioners, to assist the infants in calming themselves. She found that, in general, premature infants in the NICU setting are over stimulated by their environment, most commonly the lights and sounds around them. However, even at such a young age, they are individuals with certain likes and dislikes. To maximize growth, sleep states and weight gain, we need to tailor the care of each infant by reading his or her behavioral cues. Often times, this means decreasing the amount of stimulation.

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Little Miracle

Other families who have had premature infants may find common experiences while reading “Corey’s Story.” Corey joined the “Less than 1000 gram Club” by weighing in at 835 grams at birth. The Regional NICU at Westchester Medical Center cares for more babies less than 1000 grams than any other NICU in New York State. The experience gained from the care of so many extremely tiny premature infants is evident at many levels including: nursing, respiratory therapy, and physicians. Please read on to learn about “Corey’s Story” Lance Parton, M.D., Neonatologist at WMC.

“It was a testing point in our lives when our little miracle son, Corey was born. We did not know what was happening. After several miscarriages and carrying our little bundle of joy to then 25 weeks, we thought we were out of the danger zone. We were so very wrong.

I was working that day and I felt some discomfort pains, I thought they were nothing to be concerned about. When I got home the pains had gotten worse and I called the doctor. She was already at the hospital and asked me to come in to make sure I was not having any contractions. So I did.

When I got to the hospital, the first thing the nurse did was hook me up to a machine to see how far apart my contractions were, or to see if they were even contractions at all. My doctor and mid wife came in to see me and confirmed that my pains were indeed contractions. They had given me some medicine to try to stop the contractions, but it did not work. The contractions were coming closer together and becoming stronger. After a couple of hours, the doctor finally had gotten the contractions under control.

My doctor had called Westchester Medical Center to inform them of my transport. Westchester Medical suggested that my doctor get a sonogram done to see what the position of the baby was. With just one swipe, the sonogram showed that my son was breach upside down, with his feet in the birth canal. That was when the doctor decided to do an emergency section and deliver the baby. I was scared because the baby wasn’t due until November 9th and here it was July 27th. I knew it was way too early.

After my baby was delivered, Corey was 1 pound 13 ounces and 13 inches long and I heard him cry for a quick second. Then the nurses took him to another room. While I was getting prepared to leave the operating room and go to a recovery room, the doctor and nurses were working on my son. The Stat Flight team was called and was on their way to transport my new little boy to Westchester Medical Center to the NICU.

My husband had gone between hospitals to see my son and me for a few days. I had to stay longer in the hospital because I had a headache from the spinal epidural. As soon as I was discharged, I went to visit my son. The doctors at Westchester told me that he was very sick. When I looked at him, he was so lifeless, and frail, with tubes all over the place.

I wasn’t sure how to feel, happy because he was born or sad because he was there at the hospital. The doctor and nurses told us that it was going to be a long “roller coaster ride” and we thought that we were ready for it, but no one could be ready for what we were about to experience.

We had found out that Corey had a PIE and a PDA. We weren’t sure what it meant but we knew it wasn’t good. We later learned that PIE was pulmonary interstitial emphysema which is when air leaks from the alveoli of the lungs into the interstitial space; it is often associated with underlying lung disease or the use of mechanical ventilation, particularly intermittent positive-pressure breathing. PDA is patent ductus arteriosus. It is a known as “a hole in the heart”.

Three weeks after Corey was in the NICU he had been ill with a blood infection called Klebsiella. At that point he was translucent and almost not responsive. Two weeks later he was back on the road to recovery. But then 2 weeks after that he had come down with the same blood infection, but not as severe. He then got over that and his road to recovery looked a bit brighter.

We had gone to visit our little boy 2 times a day and called frequently. Every gram that he gained was good news to us. When his vent setting got lowered and the tests that he received came back good, they were all small miracles to us. He received several blood and platelet transfusions and undergone a lot of x-rays, blood work, ultrasounds, an MRI and a few small surgeries.

He was on the ventilator for 51 days and on the CPAP for 7 days. But after 100 long days our little miracle came home. He had to come home on oxygen and he had an apnea monitor and a pulse oxymeter, but we were just happy to have him home.

Just two weeks after his arrival home, he was off the oxygen and monitors and was beginning to gain weight, eat, and start on his road to becoming a healthy little boy”.

Written by the parents of Corey Zachary Bleakley

Save the Date:
Breastfeeding Grand Rounds Videoconference by DOH
Tuesday, August 5, 2003; 7:30-9:30am
Topic – “Breastmilk and Breastfeeding for the NICU Infant”

To access the videoconference please contact Ms. Reeves at (518) 402-0335 or by email at mailto:creeves@albany.edu
**Continued from Infant Massage**

Sounds contradictory? It’s not really. Intervention techniques depend on the individual infant. A trial of massage can be done on babies as little as 900 grams. If the infant exhibits behavioral stress signs, the massage can be simplified to a form of supportive touch called containment. This change from a moving touch to a static hold will usually result in a cessation of stress signs and, in fact, often promotes a quiet state. This gentle human intervention can help counterbalance the noxious stimuli of the infant’s environment. If the infant remains calm during the massage strokes, treatment continues while the baby’s responses are monitored.

The benefits of massage are certainly not limited to infants. Parents benefit as well. The NICU environment can be overwhelming for newcomers. Parents often long to be involved with their baby’s care, but are frequently unable or feel afraid to do so. Containment is a simple way for them to be involved with very young, fragile infants. As an infant grows and is able to tolerate more, therapists can instruct parents in simple massage strokes. They can then become acquainted with their baby’s body language, thus opening the doors of communication and intimacy. Massage can also enhance a parent’s feeling of competence, and help prepare them for the transition to home.

Full term infants benefit from massage as well. Although there is no dramatic weight gain or shorter hospital stay, they show decreased cortisol levels and improved sleep patterns, indicating a reduction in stress overall. Massage can also help counteract the pain associated with teething, colic or inoculations. Additionally, full term infants benefit from the one-to-one interaction of a massage. Both the baby and the parent learn about each other not only through touch, but also through eye contact and voice.

Massage has become an integral adjunct to medical care. It has been shown that low birth weight and medically fragile infants often benefit from this age-old treatment. At WMC’s NICU, physical and occupational therapists are on staff to work with infants and families on behavioral cues and massage. Instruction is offered in a class format or on an individual basis. Therapists also work with families on feeding, exercises and follow-up programs. For additional information please contact:

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**HAPPENING’S**

**Presented Perinatal Abstracts For 2003**


Hsu CD, Pavlik J, Harirah H. Elevated soluble Fas and E selectin level as evidence of vascular apoptosis in HELLP syndrome. Accepted for Society of Maternal-Fetal Medicine Annual Meeting, Feb 2003

Hsu CD, Pavlik J, Harirah H. Leukocyte activation and vascular endothelial dysfunction in HELLP syndrome. Accepted for Society of Maternal-Fetal Medicine Annual Meeting, Feb 2003

Hsu C-D, Pavlik J, Harirah H Amniotic fluid levels of MMP-9, IL-18, and IL-6 in intra-amniotic infection. Accepted for Society of Maternal-Fetal Medicine Annual Meeting, Feb 2003

Hsu C-D, Pavlik J, Harirah H Leukocyte activation and apoptosis in intra-amniotic infection. Accepted for Society of Maternal-Fetal Medicine Annual Meeting, Feb 2003

Harirah H, Hsu CD, Nasrallah F. Amniotic Fluid Levels of Matrix Metalloproteinase-9 and Nuclear Matrix Protein in Pregnant Women with Intra-Amniotic Infection. Accepted for Society of Maternal-Fetal Medicine Annual Meeting, Feb 2003

Do Periventricular Leucomalacia (PVL) and High Grade Intraventricular Hemorrhage (IVH) Have a Common Etiology? Paul F. Visintainer, Denise Netta, Uma Verma, Nergesh Tejani, NCBD Conference, September, 2002.


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**Kids Fair 2003**

Pictured enjoying the festivities at the RNICU booth for this year’s Kids Fair are (Left to Right) Sue Malfa, RN, and children Ana and Alexander, Rosanna (A.K.A. “Superstar”), Rodriguez, RN, Annamma John, RN, and children Dennis and Kevin; Lance A. Parton, MD and son Brian. Please note extraordinary mural created by Ms. Rodriguez for the Regional Neonatal Intensive Care Unit.
Children’s and Women’s Physician’s of
Westchester -Women’s Health Services

Contact Information

Women’s Health Services, New York Medical College-Westchester Medical Center. The Administrative Suite/Mailing Address: New York Medical College, Department of OB/GYN, Munger Pavilion SB06, Valhalla, NY 10595

Administrative office hours will be: 8am-5pm We will be closed for a standard lunch hour from 12-1pm Monday through Friday and will be following the NYMC Holiday Closing Schedule.

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Dr. Kaufi DeMasio, Assistant Professor, Maternal Fetal Medicine, Asst. Director Fellowship Program and is at St. John’s M,T,W,F at 914-964-4560

Dr. Padmavati Garvey, Assistant Professor, General Ob/Gyn, Medical Student Coordinator/Directory Ambulatory Clinics

Dr. Fereshteh Boozarjomehri, Associate Professor, Maternal Fetal Medicine, Resident Program Coordinator

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http://www.nymc.edu/neonatology

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