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Recycling From the Heart

The concept of green living takes on an entirely new meaning in light of new data showing that implantable cardioverter defibrillators can be removed and safely reused in other patients.

PATRICE WENDLING

Dr. Behzad Pavri, an electrophysiologist at Thomas Jefferson University in Philadelphia, and his colleagues from across the United States sent ICDs with at least 70% battery life to India where the devices were cleaned, sterilized, and reimplanted in 40 patients who were at risk of life-threatening arrhythmias but could not afford the $25,000 price tag for a new device.

During 2 years of follow-up, 35% of patients received appropriate shocks from their ICDs, and no infections were observed, Dr. Pavri reported at the scientific sessions of the American Heart Association.

Five patients received a second recycled device, including one in as little as a year. While some might consider this an unacceptable life span for a device, Dr. Pavri pointed out that during the life of the first device the patient received as many as 50 lifesaving shocks for a condition known as VF (ventricular fibrillation) storm.

"I have stacks of letters from patients and from family members of these patients expressing their gratitude for having sent them what is basically our trash," he said in an interview.

Dr. Pavri said the idea to recycle ICDs was hatched over a decade ago by physicians who wanted to provide the lifesaving devices, earmarked for the trash or return to the manufacturer, to patients in need in their native countries. While donated devices currently are removed for upgrade or infection, Dr. Pavri said he can foresee eventually reaching out to funeral homes for postmortem device retrieval.

"I would like to see this effort grow, but I emphasis that it has to remain a charitable effort," he said. "The moment it becomes commercially slanted, the purpose will have been defeated."

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Patients and physicians interested in donating a defibrillator can contact Dr. Pavri at behzad.pavri@jefferson.edu. To see a video interview with Dr. Pavri, go to http://tinyurl.com/3339c8d. ■

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International Adoptees Have Growing List of Medical Issues

BY LAIRD HARRISON

EXPERT ANALYSIS FROM THE ANNUAL MEETING OF THE AMERICAN ACADEMY OF PEDIATRICS

SAN FRANCISCO – It's hard to grow up in an orphanage – literally. Small stature figures prominently on a growing list of problems that children adopted from abroad are bringing to the United States, according to two adoption specialists.

"More children are being placed in-country," said Dr. Elaine Schulte, medical director of the International Adoption Program at the Cleveland Clinic Children's Hospital, one of two speakers who outlined current trends in international adoption at the meeting. "Fewer healthy children are available for international adoption, and families are pushed to accept sicker children."

The number of foreign adoptions to the United States has dropped roughly in half from 2004 to 2009, when it reached 12,753, according to figures from the U.S. Department of State cited by Dr. Schulte. Those children available are more likely to come with serious medical problems. Among the most common are cleft lip and palate, congenital heart disease, Down syndrome, orthopedic problems, amniotic band deformities, and infectious disease such as hepatitis B and C, and HIV.

Only 20% of internationally adopted children have no special medical or developmental issues; in 60%, these problems are mild to moderate and in the rest, severe, Dr. Schulte said.

Even before birth, most of these children suffer from their mother's substance exposures, malnutrition, or stress. After birth, some live through periods of abandonment before being taken into an orphanage.

When they arrive, they often face further malnutrition, abuse, and neglect because even well-intentioned caregivers don't have all the resources the children need, Dr. Schulte said. "These kids don't get talked to," she said, displaying a photograph of children confined in rows of metal cribs in a barren room. "They lie in bed staring at the ceiling."

Children coming from foster care generally fare better, but they may have changed homes frequently, leaving them with fear of abandonment.

Families who want to adopt get very little information about the children's backgrounds and health, and are getting even less time than in the past to decide whether to take these children home.

The adoption process itself can lead to health issues. The adopting families may encounter infectious diseases in the general population of the child's country, and they may be infected by the child they are adopting. "I always remind them that they have to take care of themselves," said Dr. Schulte, the mother of two children adopted from China. "What are you going to do if you get sick, and you have to take care of the child?"

For example, 106 out of 100,000 children adopted from abroad carry hepatitis A, compared with 1 in 100,000 in the general population, she said. So the Centers for Disease Control and Prevention now recommends vaccination for anyone who will have close contact with a child arriving from a country with endemic hepatitis A. She also recommended hepatitis B immunization.

With such precautions in mind, the pediatrician should begin counseling the family before the adoption. A physician can help the family interpret whatever health records are available and formulate more questions. Dr. Schulte gave the example of a child whose photograph suggested fetal alcohol syndrome.

The physician also can prepare the family with community resources, such as a referral to an adoption specialist. (The American Academy of Pediatrics has a directory of such specialists.)

Physicians should schedule their first visits with adopted children a week or two after the children arrive home. Sooner than that, the parents will be too exhausted and will not have had time to closely observe their new children. Dr. Schulte advised allowing at least 30 minutes for the appointment, because it's so important to carefully examine the child and query the parents. The visit can be billed as a 99205 E/M.

The second speaker, Dr. Sarah H. Springer, medical director of the International Adoption Health Services of Western Pennsylvania, recommended a wide range of lab tests, including a CBC, lead level, stool test for ova and parasite (O&P) (3), rapid plasma regain (RPR) or VDRL (Venereal Disease Research Laboratory) tests for syphilis, hepatitis B surface antigen (HBsAg), hepatitis B surface antibody (HbsAb), hepatitis B core antibody (HbcAb), hepatitis C virus (HCV), HIV-1 and HIV-2, a tuberculin skin test (PPD), or an interferon gamma release assay (IGRA) test if the child is older than 5 years of age. These should be rechecked after 6 months, because some diseases take that long to seroconvert.

Whatever immunization records the child brings are unlikely to meet the AAP and CDC standards. "You can't take anything you get from another country at face value," said Dr. Springer, also of Kids Plus Pediatrics at the University of Pittsburgh Medical Center. One increasingly common exception is immunizations supervised by the U.S. State Department. Even if records do meet standards, you should check titers.

Otherwise, you'll often have to start from scratch, using the Red Book catch-up schedule. Note, however, that there is no pertussis coverage for children aged 7-11 years. One alternative is to use Tdap off-label. "You sometimes have to fight with the insurance company," Dr. Springer said. "They say, 'You gave it at the wrong age.' And you say, 'Would you rather pay for pertussis?' "

Among the common psychosocial issues likely to crop up in this visit are the following:

► Malnourished youngsters may hide food in their pockets, their beds, or even their cheeks. They also may eat ravenously. Dr. Schulte's advice: Let them have as much food as they want so that they will lose their fear of scarcity.

► Some children are affectionate with everyone because they are so starved for attention. They must learn to distinguish between strangers and family.

► Some are stubborn or angry, testing to see whether their new families really want to keep them. Parents must simply insist that they will always be there for these children.

► Other children may cling to one parent, crying uncontrollably if left for even a minute. Dr. Schulte advised helping these children by playing with them on the floor until they let go, then getting up to leave, promising to return and fulfilling the promise each time. Caregivers can start with separations of a couple of minutes, then gradually increase the interval.

► Adopted children may not sleep well. Because they often fear abandonment, Dr. Schulte advised against using "cry-it-out" technique to teach them good sleep patterns.

► Many children rock themselves or display other self-stimulating behavior which they embraced because they didn't get any other stimulation.

► Internationally adopted kids have elevated rates of schizophrenia, bipolar disease, fetal alcohol syndrome, attention-deficit/hyperactivity disorder (ADHD), and a host of other mental illnesses.

So after that first visit, see the children often. Many will grow swiftly, catching up to their normal height, overcoming emotional challenges, and recovering from illnesses. Others will need years of special education and other support.

Dr. Springer and Dr. Schulte said they had no conflicts of interest to report, but they did discuss an unapproved/investigative use of the Tdap vaccine. ■