

Free At Last



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Feisty Carmen and calm Rosa a few weeks ago, four and a half months after their separation.

FREE AT LAST

Janice Hopkins Tanne

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It took a small nonprofit foundation, a loving host family, and a grueling, intricately choreographed operation to untwine Rose and Carmen Taveras and give them the gift of separate lives.

When Dr. Peter Altman of Columbia-Presbyterian Medical Center got his first look at Carmen and Rosa Taveras, he saw bright-eyed, wavy-haired 2 1/2-month old twins--as lively and adorable a pair of babies as he'd ever seen. They had every hope of growing up to be healthy adults--except that, without a million dollars' worthy of risky, sophisticated, delicate medical treatment, they would never sit, stand, walk, or lead normal lives.

They lay on their backs, Carmen's head pointing toward one end of the examining table, Rosa's pointing toward the other end. They were fused together, pelvis to pelvis.

Their legs were free, sticking up into the air in a "doing the split" position. Their plight could have been worse. Had a charitable group not brought them to New York from their home in the Dominican Republic and found doctors in Babies Hospital at Columbia-Presbyterian who were willing to attempt an operation, they would, in all likelihood, have spent their lives joined together.

For Dr. Altman—surgeon-in-chief at Babies Hospital—and his team, it was fortunate that Carmen and Rosa were ischiopagus tetrapus twins (joined at the hip level). They shared parts of a pelvis and several internal organs, but their situation wasn't hopeless. They didn't share an organ that can't be divided, like a heart. And they had the normal complement of legs.

Siamese twins (doctors use the term "conjoined twins") are born very rarely: only once in some 50,000 deliveries—and in more than half of those deliveries, the babies are stillborn. Like other identical twins, they develop from a single fertilized egg, so they are always of the same sex and have the same blood type. But their bodies, unlike those of other identical twins, fail to separate completely. Something goes wrong between the thirteenth and the fifteenth day after fertilization. (Fraternal twins, who develop from two eggs, are no more closely related than other brothers and sisters.)

For centuries, surgeons have been doing their best to set free human beings whom nature has joined together. In 1689, in Europe, twins fused at the belly-button by a simple band of tissue were successfully parted. But successful operations ("success" means that at least one twin survives) are very rare: Only 100 or so have been reported in the past 300 years.

To perform the exquisitely complicated procedures that might give Carmen and Rosa the precious gift of separate lives would require a team of 52: doctors, nurses,

respiratory therapists, technicians, and other staffers. To bring off this parting would be a sort of double miracle: Everything—the use of the high-tech equipment, the laboratories, the operating room, the \$1,000-a-day intensive-care unit beds, and the labor of all the doctors and nurses—would be donated.

Rosa and Carmen each would need at least five separate procedures, all done during the same operation. "It's an enormous commitment from a hospital," Altman says. "To take patients like this, you have to have two endowed beds [beds paid for by a charitable contribution], or beds for which the hospital will assume all expenses. And you'll need several trips to the operating room, diagnostic services, nursing services, intensive care. . . I had to get clearance from Dr. William Speck, the hospital's president.

I told him I thought we'd be able to separate them successfully, and Bill said, 'Good luck; go for it.' "

When Altman's colleague Dr. Steven Stylianos, assistant professor of surgery at Babies Hospital, first saw Carmen and Rosa, he had a vision. "I saw one twin sitting on each of my knees," he says. "I knew we could put together the team to do it. This is the payback I give for a decade of medical training."

Carmen and Rosa Taveras were born in Santiago, in the Dominican Republic, on November 15, 1992, to Ana Lia Martinez and Wilson Taveras, both 19. It was a normal vaginal delivery; the twins weighed ten pounds. Soon after their birth, they were referred to Dr. Luis Cuello Mainardi, a cardiologist at Corazones Unidos ("United Hearts") Clinic in Santo Domingo. Dr. Cuello knew that the twins might be lucky enough to get the sophisticated treatment they needed in the United States. But they'd also need someone to feed them, clothe them, diaper them, nurture them while they went through their traumatic parting.

So Cuello called the Healing the Children Midlantic foundation, a small, nonprofit organization that brings children from all over the world to the U.S. for treatments not available at home. On December 9, 1992, Evelyn Dudziec, the foundation's local executive director, in Kinnelon, New Jersey, phoned Debra and Stephen Scaturro, a couple in their late thirties who lived in the same town and who had already been host parents to five needy children sponsored by the foundation. Would they take the twins into their home for the year or more the girls would have to spend being examined, separated, and rehabilitated before they could go home to their natural parents?

"We heard 'conjoined twins,' " says Debra, a slim, pretty blonde with huge green, almond-shaped eyes. "We didn't know what that meant. We couldn't prepare. There was no photo. We didn't know how they were joined. Everyone said something different—at the side, the groin....

They hesitated. Only six months earlier, they had been devastated by the tragic loss of their older son, Shawn, 18, in a drowning accident. "Our life was our home and our kids. That's where the money went," Debra says. "After Shawn died, it wasn't important anymore." So, perhaps feeling a more intense need to help others in compensation for their loss, they said yes. Their younger son, Andrew, now 15, said yes, too. "When my mom got the call, she brought it to the attention of my father and me. We said, 'Sure, let's do it,' " he says.

The Scaturros' involvement with children needing medical help stems from their

experience several years ago, when a friend's child was hospitalized in Philadelphia. Steve looked into the pediatric intensive-care unit and saw many children who seemed abandoned and alone, with no parent to touch or cuddle them. "I would never have believed this of my husband in a hundred years," Debra says. "He doesn't like blood, surgery, hospitals. But he looked in the ICU and wondered why there was no one there to stimulate the children. He said to a nurse, 'Do you mind if I pick a baby up?' He fell in love, a different kind of love. He was never like that, even with our own children, but these were too tiny, sad, and abandoned." Soon afterward, Debra saw a local-newspaper story about Healing the Children Midlantic. The Scaturros volunteered.

And so, on December 12, 1992, the Scaturros picked up Carmen and Rosa at Newark Airport—a long bundle wrapped in a blue blanket, a head jutting from each end. "I felt so protective," Debra says. "There's such prejudice. People gawked at us, but I just looked back at them. I wanted to say, 'What are you staring at?' These are two beautiful babies."

But they presented a challenge. How do you deal with Siamese twins? How do you feed them and diaper them? Do they sleep at the same time? Do they like each other? How do you get them to play with each other? "It came so naturally, I never thought I couldn't do it," Debra says. "I never worried. I got creative." The twins had a single anus and two urethral openings. They had one bellybutton right on the line where they were joined. Debra found that using adult diapers worked well. To dress them, she used two "onesies," which looked like big T-shirts with snaps on the bottom. "I put one on the correct way and the other on backwards on the other twin. With short sweaters on top, they looked fine," she says.

"From the first, I decided to treat each twin as a separate individual," Debra says. "I would give one a full bath, then her sister, although it took longer." The Scaturros quickly found that the twins had different personalities. "Carmen is the determined, feisty one. She's more intense, more outgoing and demanding. Rosa is more laid-back and lazy. Rosa just loves you automatically," she says.

"They didn't always sleep at the same time," Debra says. "When Carmen slept, Rosa would occupy herself with toys. But if Rosa slept, Carmen would sometimes scream until she woke her up." The Scaturros did their best to make the twins interact. When they were laid on their backs, they could sit up a bit. "I propped them up so they could see each other. We wanted them to know each other."

Stephen Scaturro operates a family business, Alpine Painting and Sandblasting Contractors. Debra worked in the business for fifteen years, and now is an unpaid fundraiser for the Healing the Children foundation. As part of their contribution to helping Carmen and Rosa, the Scaturros have taken the twins into their home and paid almost all their expenses—food, clothing, and medications. Debra estimates the cost at \$100 to \$150 a week, and says they are glad to do it.

Soon after the twins arrived at the Scaturros', Debra and Steve took them to a pediatrician at St. Joseph's Hospital and Medical Center in Paterson, which often treats foundation-sponsored children. The doctor pronounced them in good general health. Then Evelyn Dudzic began contacting the few hospitals that had the skills, the technology, and the team to separate the twins. She called Altman at Babies Hospital.

Altman had separated three sets of conjoined twins while at Children's Hospital in

Washington, D.C.; Dr. Stylianos had spent two years training in pediatric surgery at Children's Hospital in Boston with Dr. W. Hardy Hendren, an expert in this rarefied field. "Hardy told me, 'When you're in a tough spot, I'll be sitting there on your right shoulder,' " Stylianos says.

In planning the grueling surgery needed to separate Rosa and Carmen, Altman and Stylianos had to know exactly how the babies were joined. "We had three full days in the radiology suite and one day in the OR [operating room] for endoscopy," Stylianos says. A cystogram showed that there were two bladders. However, there was backward flow of urine from Rosa's bladder up through her right ureter into her kidney. That meant a risk of infection, so she was put on antibiotics.

A CAT scan showed that each twin had two functioning kidneys—the normal number—but one of Carmen's was in an unusual place, the left side of the pelvis, rather than higher up in her body. Abdominal ultrasound examination showed that each twin had a normal liver, spleen, pancreas, and gallbladder. And each twin's spinal cord was normal. A barium enema showed that the girls had separate small intestines but they shared the lower part of the gastrointestinal tract—the colon, or large intestine, which led to a single anus. Another study revealed that each twin had a urethra (the tube leading from the bladder to the outside of the body). Each twin had a vagina, a uterus, and two ovaries.

"Our expectations were high. We went way beyond hoping for two survivors," says Stylianos. "We expected two functional little girls." Three months ahead of the planned surgery, Stylianos began assembling a team of pediatric anesthesiologists, plastic surgeons, pediatric orthopedic surgeons, general pediatric surgeons, pediatric urologists, and a skilled pediatric nursing staff. "We had to come up with a plan, recruit people, choreograph the separation and reconstruction," he says. "We planned one procedure so as not to get in the way of the others. We wanted to minimize the surprise factor. The two most difficult problems were reconstruction of the pelvis and assuring ample soft tissue [muscle and skin] for coverage after the bowel reconstruction."

Plastic surgeon Dr. Mark Sultan estimated that Carmen and Rosa would need about one-and-one-half times the skin that now covered their joined stomachs and bottoms. On March 8, Dr. Sultan inserted two tissue expanders, one on each twin, under the skin in the lower belly. Tissue expanders are sturdy plastic balloons that are slowly enlarged to stretch the overlying skin, providing the soft tissue needed for coverage in various plastic-surgery procedures. Over the next two months, every other day, Debra and Steve injected sterile water into tubes leading into the balloons, slowly enlarging them and stretching the skin. But as the expander bags bulged larger, they made it harder for Rosa and Carmen to bend up to see each other, so the Scaturros positioned mirrors beside them.

At dawn on June 7, Steve Scaturro, dressed in yellow operating-room scrubs, holds a 30-pound armful of crying babies. Carmen and Rosa are miserable. In preparation for surgery, they have been deprived of food and given bowel-cleansing liquids for the past day. They cry. And they cry. Steve jiggles them up and down and makes cheerful, concerned noises. Debra weeps with worry. Her sister, Donna Huggins, who has come up from Savannah as support, holds her hand and cries.

At 7:30, the babies are taken to Operating Room E in Babies Hospital. Altman

and Stylianos have decided that the teams operating on Rosa and Carmen should be in the same OR even after the babies are parted. It will be easier for the teams to switch back and forth in their carefully orchestrated schedule. The room will be kept very warm, since the surgery will be so extensive that heat loss can be a problem for the babies. In the OR, the twins are positioned on a table; the TV monitor at each child's head (one labeled CARMEN, one labeled ROSA) displays her EKG and heart rate. Dr. Arthur Smerling is Carmen's anesthesiologist; Dr. Robert Kazim is Rosa's.

The babies are swabbed with orange-brown Betadine antiseptic solution, covered with stick-on monitors of heart rate, blood pressure, and oxygen in the blood, and hooked up to anesthesia apparatuses and to respirators that will breathe for them. They are anesthetized. Their legs are swathed in sterile gauze for warmth.

Now, at 9:50, a last check. "We want to make sure Carmen's pelvic kidney is in the place we think it is. That determines where we make the incision," Altman says. Dr. Carrie Ruzal-Shapiro comes in with an ultra-sound apparatus the size of a supermarket cart. (With the doctors and nurses, the hospital's TV crew, which is recording the operation for teaching purposes, Max Gomez and his crew from WNBC, photographer Bud Glick, and me, plus every interested observer who can crowd in, the OR is jammed.) Dr. Ruzal-Shapiro confirms that Carmen's kidney is right where they thought it was.

At 10:25, plastic surgeon Sultan arrives. He placed the tissue expanders to begin preparation for the twins' separation; he makes the first incision to remove them and begin the operation.

Sultan has planned the placement of the expanders so that the incisions will result in a neat scar that may become almost invisible with time, or at least curve naturally down the midline of each twin's body. He makes a fine, thin cut over the purple marker line he has drawn on each twin's body. First the scalpel, then the cautery. Sultan removes the tissue expanders. Each is a clear, saline-filled bag about the size of a fat adult fist. Carefully, his finger underneath for guidance, Sultan cuts the skin straight across between the twins' legs; this area will be their bottoms.

Now white, blubbery loops of bowel can be seen, along with the translucent, fanlike mesentery membrane that tethers them to the abdominal wall. Carmen and Rosa share a single large intestine that's about the diameter of the surgeon's finger. This must be cut, with each twin getting a functional half. Altman and Stylianos are on opposite sides of the table, assisted by Dr. Barry Hicks, chief resident in pediatric surgery, and a nurse. They begin cutting and dividing the mesentery, which is threaded with the arteries and veins that provide the bowel's blood supply. Each twin's section of the shared colon has an adequate blood supply.

At 12:10, about five hours after they've started, the team has divided the bowel. Altman and Stylianos gingerly cut through the muscles and soft tissue between Rosa's legs and Carmen's legs. Reaching the place where Rosa's pelvis joins Carmen's at one side of the body, they cut cleanly through the bone with the pointed cautery tool. Gently, they push the bowel back up toward the stomach, out of the way.

Next the team will thread a catheter up into each twin's bladder. Hicks's side of the table is tilted up, and Altman kneels and gently threads a catheter up Carmen's

urethra. The surgeons begin cutting through the place where the pelvises are joined on the other side of the body. Then they thread another catheter up Rosa's urethra into her bladder. They mark the skin where they will separate their bottoms underneath. They cut the skin joining the twins, staying wide of the urethral openings and vaginas. Now we begin to see the two buttocks of each twin.

Pediatric urologist Dr. Terry Hensle has arrived, and a urology supply cart is wheeled in. One team will work on Car-men's bowel while the other team works on Rosa's urinary tract. Then they'll switch.

Now Rosa and Carmen are joined only by their ureters. Each twin has two, the normal number. But one of Rosa's ureters goes from her kidney to her bladder, and the other goes to Carmen's bladder. And one of Carmen's ureters goes to her own bladder, the other one to Rosa's.

It's 1:45. The second table is moved up, and the room is crowded as the moment of separation approaches. Wearing snaillike magnifying loupes on his eyeglasses, Hensle dissects out Rosa's ureter, a glossy, creamy white tube thinner than thin spaghetti. With a needle and thread, he puts a stitch through it to mark it. Hicks threads a clear catheter into the ureter. Hensle identifies the other ureter, marks it with a thread, and cuts it. They do the same for Carmen.

Altman says, "It's 2:06. Somebody go up and tell the family the girls are now separate." Carefully the doctors transfer Carmen to the second table. By 2:20, Rosa and Carmen lie spread-eagled on two separate tables. They are beginning to look like ordinary babies, even though the lower part of each girl's body is open, exposing bowel and bladder. Their legs are loose and floppy because their pelvises must still be reconstructed.

Hensle begins work on Carmen, and hits it lucky. "Hey, Peter," he calls to Altman, "I think I might just reimplant Car-men's ureter into her bladder. It's long enough." (From studies before the operation, Hensle had thought the ureter might be too short.) With Carmen's bladder open, Hensle pulls the catheter and ureter through into the bladder, and begins hair-fine stitches to hold them in place.

Meanwhile, at the other table, Altman and Stylianos bring Rosa's bowel up to a colostomy opening on her abdominal wall. At 3:05, Hensle is finished with Carmen's urinary tract. "We reimplanted the ureter in the bladder, just the way God meant it to be," he says. A Foley catheter in Carmen's bladder will drain urine for several days, to give the wounds time to heal. Altman says, "Okay, Dr. Hensle, whenever you want to" switch." The twins' bodies are covered with pads soaked in warm saline to maintain their temperature.

At 3:12, the teams change places. Now, at Carmen's table, Altman, Stylianos, and Hicks begin reconnecting her bowel and thread the shiny, silver-pink colon up to a colostomy opening on her abdominal wall. Hensle and Dr. Harry Koo have reconnected Rosa's ureter to her bladder and are closing the bladder, with a catheter in place. At 3:47, they are finished.

Just on schedule, pediatric orthopedic surgeon Dr. David P. Roye Jr. and his team come

in. Dr. Roye says, "We'll cut the iliac crest [the bony ledge you, rest your hands on when you put them on your hips] and do an osteotomy [cut and remove some bone]." That will allow them to curve the abnormally flattened pelvis of each twin around into a normal cup shape. Then they'll tie the pelvis together at the symphysis pubis.

Stylianos says, "We're aiming for a 7:30 close." So far, everything is on target. This extraordinary surgery is being piped down the hall to the pediatric anesthesia conference room, where, on large-screen TV, staffers have a better view (shot through the medical center's overhead camera) than many people in the operating room. Reina Portes, Stylianos's office manager, watches her boss and the twins she has come to feel close to. Nurses, doctors, technicians, medical students, residents, and curious staffers drift in and out.

It's 4:40 now, and Roye is chiseling away at Rosa's hip socket as Stylianos and Altman finish Carmen's colostomy. Roye moves Rosa's leg, considering just how to reconstruct her pelvis and hip socket for the closest to normal function. "Another half-hour, I think. The other one should be faster," he says. Pediatric orthopedic surgeon Dr. Gail Chorney, Roye's associate, will begin reconstructing Carmen's pelvis as soon as Altman and Stylianos finish her colostomy.

It's getting on toward five o'clock—already ten hours after the start of the operation. Orthopedic surgeons use hammers and chisels when other surgeons use microscopes and hair-thin sutures. Roye will try to pull the bones of Rosa's symphysis pubis together with long sutures threaded through wires in the bones, but he must be careful that the pelvic bones do not bear down on the bladder. Roye places strong wires in each side of Rosa's pubis, then pulls the bones together with sutures secured to the wires. An orthopedic resident holds Rosa's legs in the normal position they hope for.

At the other table, Dr. Chorney and a resident are working on Carmen's hips. Then, all of a sudden, Chorney asks from Carmen's bedside, "Peter, would you take a look at this? Have we got a blood vessel?" Blood wells up in Carmen's hip area. Altman comes over to look.

Some vein or artery must have been cut; Altman and Stylianos puzzle over which one. The anatomy around the twins' hips is abnormal, and it's hard to tell what's what. Stylianos ties off a small vein that seems to be bleeding into Carmen's hip area. The area stays dry, and the orthopedic surgeons proceed to close Carmen's pelvis, pulling the bones together with heavy-duty wire.

The doctors at Carmen's table want a sterile Doppler (an ultrasound device) to measure blood flow through her leg. The sound will be clear and pulsating if there is good blood flow or scratchy and full of static if there isn't.

At the other table, they're finishing up. Altman and Stylianos close Rosa's abdominal wall, sewing together the muscle layers. Plastic surgeon Sultan is back to do the final closure of the skin. Stylianos and Altman lift Rosa and carefully arrange the tissues in her genital area. Altman is unhappy with the look of Rosa's colostomy. He cuts new edges and uses the electric cautery to seal off blood vessels, as Hicks restitches the colostomy to the left upper abdominal wall. It's 7:10, and Sultan is sewing Rosa's perineum. Soon Rosa will go upstairs to the pediatric ICU.

Stylianos goes back to the other table and uses the Doppler to check blood flow

on both of Carmen's legs. He unwraps the sterile gauze around her legs. The right leg is swollen. Later, he would say, "I felt I was there at the bottom of the barrel and the whole hospital was on top of me."

Sultan is closing the skin on Rosa's abdomen, using staples. There is plenty of skin, so concerns about infection lessen. He decides to create a bellybutton. "Tell me if that's not as pretty an umbilicus as you'll ever see," he asks. "Trouble is, it's an outie." He turns the tissue under, creating a normal-looking "innie" bellybutton for Rosa. At the other table, Stylianos is doing Doppler tests on Carmen's right leg again. Opposite him, Hicks shakes his head slightly. On Carmen's left leg the pulse is loud and clear. On her right leg, the sound is scratchy and unclear. A crowd gathers at Carmen's table.

Stylianos decides they must reopen Carmen's incisions, find the severed blood vessels, and repair them. "I hope they have enough length to do an end-to-end reconstruction," Roye says.

Later, Stylianos explains that during the osteotomy, an artery and a vein had been cut. Seeing the bleeding, he sutured the vein. But arteries, when cut, often go into spasm, pinching off blood flow, and they retract backward, like worms pulling into their holes. So the surgeons didn't see any further leakage of blood. It was reasonable to assume the problem had been taken care of and to go ahead with reconstructing Carmen's pelvis. And until Stylianos unwrapped Carmen's leg, it wasn't apparent that there was a problem.

"The ischemic time [when blood flow and oxygen supply were diminished] isn't bad—two to three hours," Stylianos says.

Rosa is all finished. At about 10 P.M., she is transferred to the ninth-floor pediatric intensive-care unit. Altman joins Steve, Debra, and Donna for an emotional meeting. Altman tells them things have gone well and they can see Rosa. Debra hugs him. Steve shakes his hand. "What does she look like?" Debra says.

She is heavily swaddled, and there are tubes running from her mouth, nose, arm, and bladder. But the shape under all those splints and wrappings is the shape of a normal 6-month-old child.

It was 2:06 in the afternoon when Steve and Debra's son Shawn was born. And at 2:06 P.M., the twins had been separated. A woman of deep spiritual feeling, Debra begins to think of Shawn as an angel watching over the girls' well-being.

Downstairs, Stylianos and Hicks have repaired the artery and the vein to Carmen's right leg. The vessels are tiny-thinner than a plastic coffee stirrer. Now what should they do? Should they heparinize Carmen? Heparin will prevent the formation of blood clots, which often occur on sutures and would clog blood flow through those perilously tiny, delicately repaired blood vessels. But it will increase Carmen's tendency to bleed elsewhere. They decide to give heparin.

It's well past 10 P.M. If Carmen's leg doesn't get better, what will they do? The artery may be under too much tension for adequate blood flow. Stylianos and Hicks agree that if Carmen's leg isn't getting enough blood, they should take a graft from the saphenous vein in Carmen's other leg and splice it into the problem artery, a procedure

similar to coronary artery bypass grafting. But since a baby's arteries are so tiny, Stylianos and Hicks want an operating microscope to give them their best chance for this limb-saving surgery.

Less than ten minutes later, the operating microscope glides through the doors of the OR—\$200,000 worth of high-tech equipment the size of an industrial refrigerator lying on its side. But will they need it? Carmen's leg is starting to look better. It's raised up to improve blood flow and drainage and to reduce swelling. Elevating the leg reduces tension on the tight blood-vessel connection. The heparin may be helping.

Stylianos is tired and dejected. Things went very well, but they did not go perfectly, despite all the planning. Sultan is finishing up, making Carmen a bellybutton. Hicks, a study in tiredness and frustration, is writing up his notes.

But things are looking better. At 1 A.M., Carmen is gently transferred upstairs to the ninth-floor pediatric ICU, where she lies in a crib next to her sister.

Everyone is concerned about Carmen's leg. Will they need to reoperate? Roye, the pediatric orthopedic surgeon, has decided to stay in the medical center, in case he's needed to undo the pelvic reconstruction. "If I stay, I'll feel relatively comfortable. If I leave, I'll feel very uncomfortable," he says. And, of course, Stylianos stays, sacking out for a few hours' sleep on his blue office couch.

But there's no emergency that night. No one needs to wake him.

A little after 1 A.M., when Debra and Steve get their first look at both twins, sleeping side by side in separate cribs, they are stunned. They've expected this, but emotionally they're still unprepared for the sight of two discrete babies. All Debra can find to say about that moment is, "It was unreal."

Debra and Donna spend every day of the next two weeks in the pediatric ICU with the babies; Steve and Andrew visit as often as they can. The staff makes sure the twins can see and hear each other. They seem to enjoy the freedom of movement they've never had before. "They love being separated," Stylianos says. "But they interact and play with joy."

On June 22, casts are put on Rosa and Carmen to help turn their legs to a normal position. "Those first few weeks were really hard," says Debra. "The girls were miserable—they couldn't move, and they were very frustrated. I can't say anything positive about that time: They were crying, cranky, and sore. Carmen was so traumatized that if she saw anyone new, she'd start crying."

In July, the casts come off, and Debra takes the children to Cynthia Ace, a physical therapist, who teaches Debra how to stretch the tight muscles in the children's legs and help the girls learn to crawl and stand. They are nearly 8 months old, but, Ace says, their development from the waist down is comparable to that of 3-month-old children.

"A couple of days before the casts were removed, it was very exciting—Rosa started to raise her legs, and she'd rock from side to side," Debra says. "Carmen was still sore; she was not doing very much. She certainly didn't like being confined. I had to keep

the toes on her right foot stimulated."

In September, Steve and Debra move to a century-old historic house in a town about 45 minutes' drive from their old home. Now that they live farther from Ace, Debra takes the children for therapy sessions once a week. Ace provides the therapy free, on her day off.

Carmen's recovery lags behind her sister's because of the problem with her right leg. Stylianos notes that when the doctors made the decision to reopen the incision and repair the artery and vein, "we got ahead of a major disaster."

In the Scaturros' warm and loving home, both twins are doing fine—rolling, tumbling, crawling, trying to stand. "You praise a child when it learns to do something. What do you do with twins?" Debra asks. "If you praise one, the other thinks, 'What about me?'" So the kisses and cuddles must be distributed equally. Carmen does everything first. She learned peek a boo, patty-cake—all that—first. Rosa is a day or two behind in learning games. They're very different."

"You can tell they're very intelligent," Andrew says. "And now they seem more mature. Even though they're babies, they act older. They should be something big and important, like doctors."

Now, in November, the twins in the vigorously crawling stage, getting into everything. Their development, as they near their first birthday, is like that of 7-month-olds, Ace says. A few weeks ago, Rosa began standing upright for moments when holding onto a sofa or someone's hand. Just days later, Andrew reports, "Carmen stands up if you hold her hands. She stood for the first time with me." A good sign: Carmen's leg muscles must be strengthening.

What happens next? Altman and Stylianos think the twins need several months to recover, learn to walk normally, and let their muscles heal before they go back home to their parents in the Dominican Republic. As soon as the twins were separated, the Scaturros called Dr. Cuello in Santo Domingo to tell him about the surgery and to ask him to tell Ana Lia and Wilson; in the months since, they've sent a stream of letters, photos, and videotapes that show how well Carmen and Rosa are doing.

Since the girls will be going back to their parents in the next few months, Debra and Steve have begun collecting funds to help Wilson and Ana Lia buy cribs, clothing, and baby paraphernalia locally.

The doctors are worried about health conditions and medical care in the girls' homeland. But everyone has always been committed to returning Rosa and Carmen to their parents. And publicity about the twins in the Dominican Republic seems to have led to better living conditions for the family.

After months of recovery—and getting to know their parents—in the Dominican Republic, the twins will come back to Babies Hospital so Altman and Stylianos can evaluate them for "pull-through" operations to bring each twin's colon down to her bottom and create a new anus for normal defecation. That can be done only if each child has enough strong tissue to create a sphincter muscle. Otherwise, a colostomy—a bag easily hidden under clothing—may be better than a life in diapers because of fecal incontinence. Time

will tell if the surgeons can give the twins normally functioning bowels.

How can the Scaturros part with Rosa and Carmen? "These are different from other children [who stayed with the family]. They're more like my sisters," says Andrew. "We've had them since they were a month old," Debra says. "If their mom couldn't handle caring for them, they'd be my daughters"—Steve and Debra would adopt the girls.

And how much did this exercise in altruism, this million-dollar life-saving miracle, cost you and me? Nothing. "We donated our time," Sultan says. "The public doesn't realize how much free care there is." Babies Hospital provided those endowed beds, paid for by charity. And the Scaturros have fed, clothed, housed, and loved the twins out of their own resources. This operation rescue cost the taxpayers nothing.

This week, Carmen and Rosa, the Columbia-Presbyterian team, the Healing the Children Midlantic foundation, the Scaturro family, supporters, and helpers will celebrate a very special birthday as the twins turn 1 year old, separate at last. "We celebrate a true miracle of life. God's littlest angels make their debut independently," says the Scaturros' invitation. Debra has a vision of their son Shawn looking down as an angel and watching over the twins for a happy life.