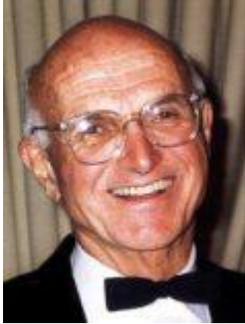


An Interview with Dr. Joseph Murray, Organ Transplant Pioneer



Dr. Joseph Murray

When Nobel laureate winner, Joseph E. Murray, MD, and his colleagues transplanted a kidney from Ronald Herrick into his identical twin, Richard, on December 23, 1954, it was the first time an organ from one individual had ever been successfully transplanted into another.

Almost 50 years later — on May 25, 2004 — Martin Woolf, the Communications Manager at the New York Organ Donor Network in New York City, interviewed Dr. Murray for the agency's publication *On the Beat*.

Q: This is the 50th anniversary of the first successful organ transplant, which you performed. How do you feel about this personal achievement?

Dr. Murray: John Wooden, the UCLA coach said the secret of stardom is the rest of the team. It was teamwork. We had a wonderful group at the Brigham. It started with Dr. George Thorn, who was the chief of medicine. Dr. Frank Moore came on as chief of surgery. Thorn and Moore were really the leaders of the group. John Merrill was the nephrologist and Dr. J. Hartwell Harrison was the urologist. Dr. Gus Dammin was the pathologist. The dean of the medical school and the administration were behind us. So the whole hospital was geared for the project. We had good leadership. I was the surgeon.

Q: But you were the leader in terms of the actual transplant.

Dr. Murray: Oh, yes. As far as actually taking responsibility for the patient and getting things all ready. I did all lab work for two years, perfecting the operation, because before that time there had been sporadic attempts at kidney transplants in Europe and in this country. Because of my [World War Two] experience, I had seen skin grafts from other people disappear and wondered why. So when I got back to Brigham, I got into the lab and worked with the group, because I realized a kidney after transplant had to survive on its own. So I swapped kidneys in dogs until I got the technique down.

Q: What made you go ahead with the transplant? Was it because you had found identical twins?

Dr. Murray: We had a laboratory model of a transplanted kidney without any immunological barrier. That is, we took a kidney out of a dog, put it on the operating table, and then transferred it to different parts of the same dog. And we found out a good place for it to fit. So therefore we had this solid laboratory evidence that a transplanted kidney, in the absence of immune problems, could function. And then on our doorstep, we happened to have had identical twins. One was dying of kidney disease, the other one was healthy. It was the perfect human setup for our laboratory model.

Q: Richard Herrick survived for eight years. What else can you tell us about him?

Dr. Murray: He married the nurse who took care of him. He had two children. They were up here [in Boston] just last week. We had a big celebration with Richard's wife and his children. His daughter works in a dialysis unit in Maine, and she looks just like her dad.

Q: And what about Ronald?

Dr. Murray: Ronald was also there. I see Ronald a lot. He and I, when we see each other, we just hug each other, because we have been through such a lot together. He has grown, and so have I. It has been a great part of our lives.

Q: You said teamwork played such a major role in the first transplant. And you have been quoted as saying that it was just a part of your week's work. Most people would expect that you'd see yourself as being a celebrity.

Dr. Murray: You know, there's a book on Chris Barnard [the South African who did the world's first heart transplant] on being a celebrity surgeon. It's a Greek tragedy. The poor guy couldn't handle it. Pride is the first of the capital sins. I am very grateful, and I am blessed, but I am not proud.

Q: But in 1990, of course, you received the Nobel Prize in Medicine, sharing it with Dr. E. Donnall Thomas [the latter for his contribution to bone marrow transplantation]. What did the prize mean to you 36 years after the transplant?

Dr. Murray: My wife [Virginia "Bobby" Link] and I happened to be at a surgical meeting in San Francisco. We were on a cable car, just the two of us. And she said, "Joe, I'm glad you were recognized but it doesn't make

any difference in our lives. We've got our kids, we've got our family, we've got our lives together, and it's just the frosting on the cake." And that's the truth.

Q: You spoke earlier about the need for suppressing the immune system as being one of the biggest challenges you faced, starting with skin grafting. So how do you think the commercial approval of cyclosporine in 1983 affected the progress of transplantation?

Dr. Murray: It was a tremendous boost. Imuran [the immunosuppressive drug azathioprine] and steroids were the two keys before that. But Cyclosporine notched it up. It was sort of like putting extra juice in the gas tank, I guess. It led the way to other organ transplants. So it was big boost.



Front row (left to right): Richard Herrick, kidney transplant recipient; Ronald Herrick, kidney donor. Back row (left to right): The Brigham transplant team - Dr. Joseph E. Murray, surgeon for the recipient; Dr. John P. Merrill, nephrologist and co-leader of the team; and Dr. J. Hartwell Harrison, urological surgeon for the donor.

Photo: Brigham and Women's Hospital

Q: As a surgeon, you were world-renowned for both transplantation and reconstruction. But after your success with transplantation, why didn't you stick with it?

Dr. Murray: I did not want to be a transplant surgeon, per se. I loved surgery; I loved reconstruction, taking care of children with congenital anomalies. I loved cancer work; I worked at Sloan-Kettering, at Memorial Hospital, for six months. I said to my boss that I was delighted with what I had done but that I was anxious to spend most of my time on reconstructive surgery, mostly with children and cancer patients. So we spent two years training a couple of surgeons to take up after me. So after ten years, I gave up transplantation.

Q: Dr. Murray, going back to the beginning, as it were, I was fascinated to read how, during World War Two, you led a team that performed 24 surgeries to restore the face of Charles Woods, an aviator who had suffered 70 percent burns.

Dr. Murray: You know, there again, it was teamwork. We were at Valley Forge General Hospital [U.S. Army, Phoenixville, PA.]. We had young guys around, who were mutilated, and Charles was one of them, one of hundreds. Charles is still alive and a great guy, but he's getting Alzheimer's now. I am in touch with his children.

Q: So do you think there is a link between your surgery in transplantation and reconstruction?

Dr. Murray: Oh sure. It's just repair. The link is taking care of patients. I went to medical school to be a doctor purely to take care of patients. I've operated on six continents, and each person is the same. The liver's in the same place, the kidney, the heart. So, as a fellow human, I feel very much part of humanity, I guess.

Q: Returning to the title of your autobiography, *Surgery of the Soul*. What was the basis for this?

Dr. Murray: I'd give talks about a group of patients like Charles Woods, somebody else with cancer, and so on. I was giving a talk, and an editor in the audience said, "Dr. Murray, you should put these patients together and publish a book." And I said, ok, and I wrote about 12 patients, and I titled the rough manuscript *Surgical Snapshots*. Well, one editor looked at it and said, "What you're doing is operating not only on the body but you're operating on the psyche of patients." He suggested *Surgery of the Soul*. I thought it was kind of corny, but other people liked it, and so that's how it evolved.

Q: You retired in 1986 after your stroke. How have spent your time since then?

Dr. Murray: [Laughs] It was fantastic. I found I was relieved of the nagging subliminal worry about patients. But now I am with young doctors and students. I speak with all groups, clinical scientists, and high school groups. My calendar is full all the time.

Q: From the time of your first transplant with identical twins, to transplants with unrelated deceased donors, transplantation has saved so many lives. What do you think is the future of organ transplantation?

Dr. Murray: George Eliot in *Middlemarch* says, "Among all forms of mistake, prophecy is the most gratuitous." We don't know the future. Fifty years ago, I never would have dreamed that this was going to happen. [Transplantation] has expanded, but it's one step at a time.

Q: Talking about issues facing the transplant and donation world, what do you think about donors, or their families, being rewarded with payment?

Dr. Murray: I am very concerned about the buying and selling of organs. I was at a conference in Singapore several years ago stating that there should never be any financial remuneration for donations. I think the minute we get cash involved, the motivation diminishes.

Q: If that's not the way to go, how do we answer the reoccurring question of how to increase organ donation?

Dr. Murray: I think it's just a fact of life that there aren't enough [organs] to go around. All we've got to do is make organs, and this is the stuff we are doing already at M.I.T. and Harvard, trying to lay a framework for creating organs. We have to do everything that you are doing with your organ banks to maximize the use of every organ; we don't want to lose any.

Q: My final question: How do you feel about being called the "father" of organ transplantation?

Dr. Murray: Well, people have said that. I was just a member of the team, and I was delighted to be there at the right time. I am very pleased to be recognized, but it's not the be all and end all. I am right in the middle of reading Alexander Pope's *Essay on Man*. It's about how everyone shares happiness, the beauty of the flowers and the sky. I think really we live in Eden, if we're only smart enough to know it.



TRANSPLANT SURGEON AND FIRST KIDNEY DONOR APPEARED TOGETHER AT U.S. TRANSPLANT GAMES: In July 2004, the National Kidney Foundation conducted its eighth biennial Olympic-style U.S. Transplant Games, this time in Minneapolis-St Paul. Shown at the Games, in an historic moment for the world of donation and transplantation, were transplant pioneer Dr. Joseph Murray (right) and Ronald Herrick, the first kidney donor, as they lit the torch at the opening ceremonies.

