

The Role of PBBH/BWH in the Development of Dialysis Therapy

J. Michael Lazarus, M.D.

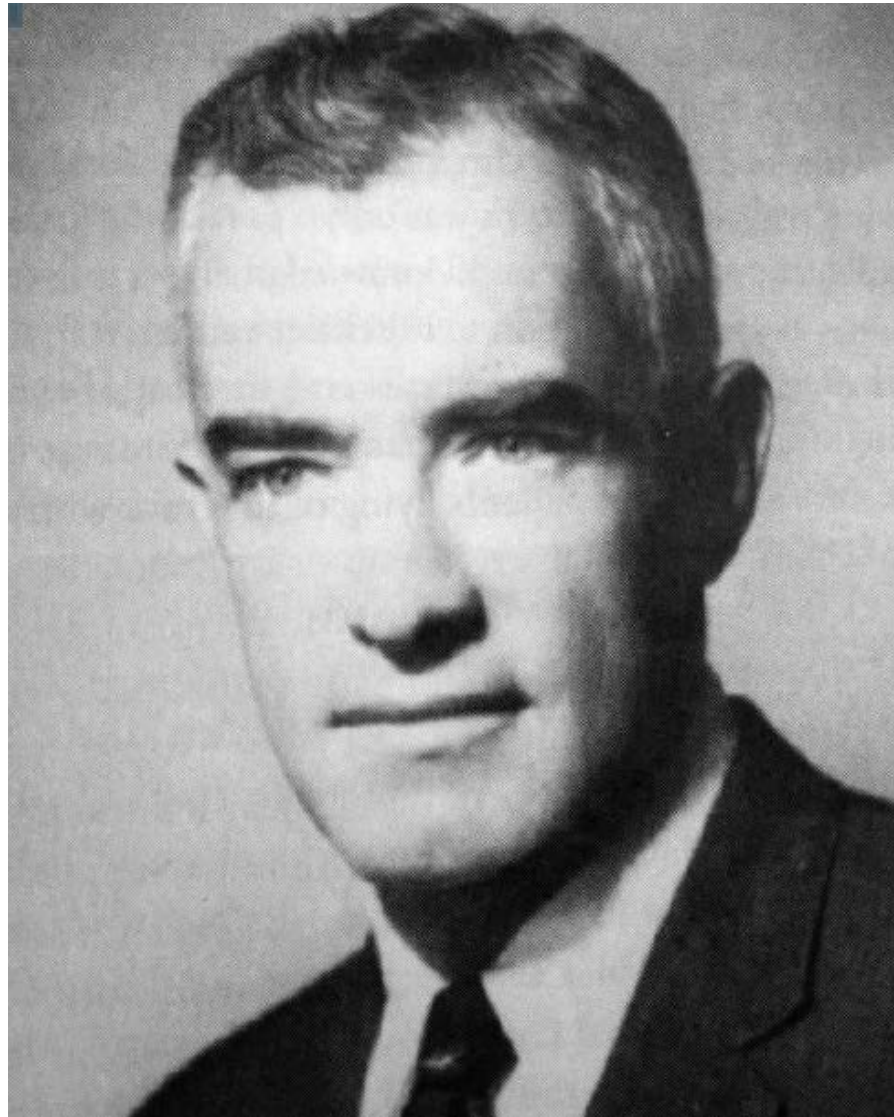
1969-1996

February 28, 2013

PBBH Dialysis Unit



Peter Bent Brigham Hospital



John P. Merrill, M.D. (1917-1986)
Chief – CardioRenal Section
Peter Bent Brigham Hospital

THE RÔLE OF THE ADRENAL IN HYPERTENSION

By JOHN P. MERRILL,† M.D., *Boston, Massachusetts*

ANNALS OF INTERNAL MEDICINE

MAURICE C. PINCOFFS
Editor

PAUL W. CLOUGH
Assis

VOL
(OLD SERIE
July to D

Diagnosis of hypertension due to occlusions of the renal artery.

N Engl J Med. 1957 Mar 28;256(13):581-8.

Margolin EG, Merrill JP, Harrison JH.

Renal circulation in congestive heart failure.

Prog Cardiovasc Dis. 1961 May;3:511-9.

Merrill JP.

The Role of the Kidney in Human Hypertension*

I. Failure of Hypertension to Develop in the Renoprival Subject

JOHN P. MERRILL, M.D. † CARLOS SCHUPAK, M.D.

Canad. Med. Ass. J.
Jan. 25, 1964, vol. 90

328 MERRILL AND SCHUPAK: HYPERTENSION IN RENOPRIVAL MAN

Mechanisms of Hypertension in Renoprival Man

J. P. MERRILL, M.D.* and E. SCHUPAK, M.D., † Boston, Mass., U.S.A.

THE precise role of the kidney in the production and maintenance of arterial hypertension has been a subject on which there is considerable disagreement, although the fact that the kidney does play a role is incontestable. The various roles which the kidney may play in this complex phenomenon are roughly sketched in Fig. 1. (A) It has been postulated that the damaged kidney releases into the systemic circulation a pressor substance, or the precursor thereof, which acts directly upon the small arterioles to produce hypertension. (B) The affected kidney might fail to metabolize a pressor substance formed in the kidney or elsewhere which then accumulates, with resultant increase in arterial

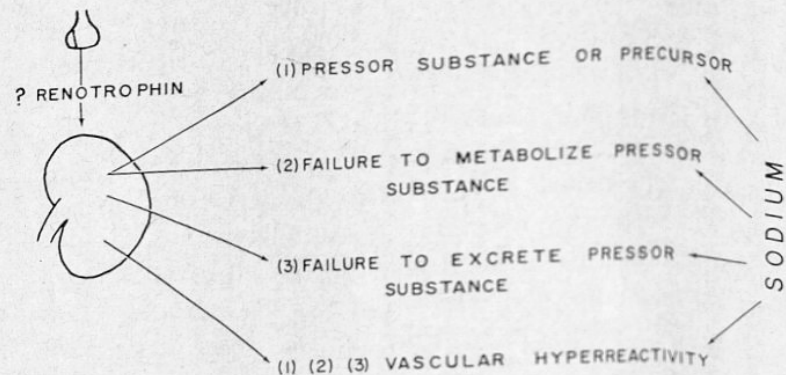


Fig. 1.—Possible role of the kidney in renal hypertension. (Reproduced, with permission, from Merrill, J. P., *Amer. J. Med.*, 31: 931, 1961.)

* From
Massachusetts
Department
of Medicine
Institutes
Manuscript

**Renin Secretion in the Patient
with Hypertension**

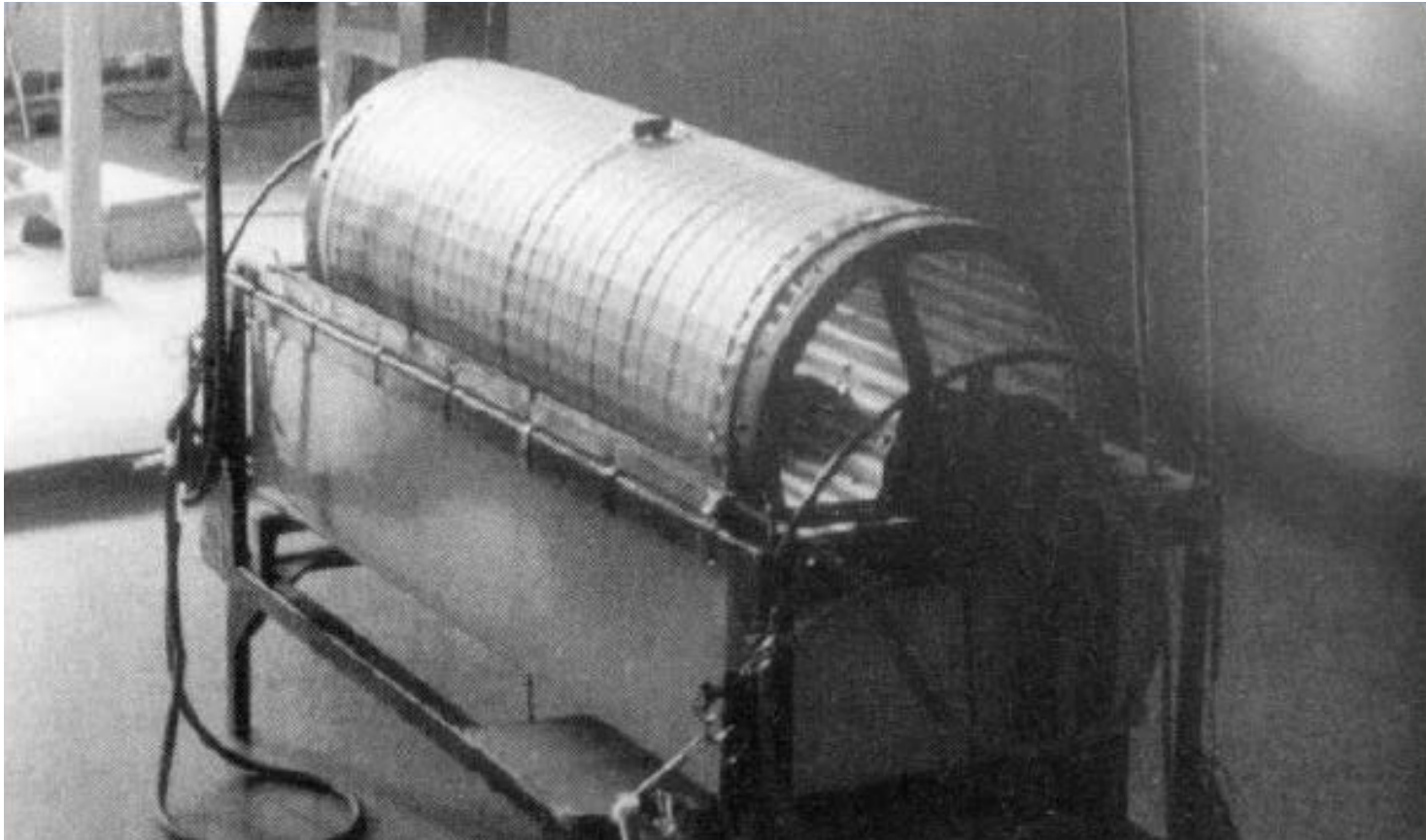
Relationship to Intrarenal Blood Flow Distribution

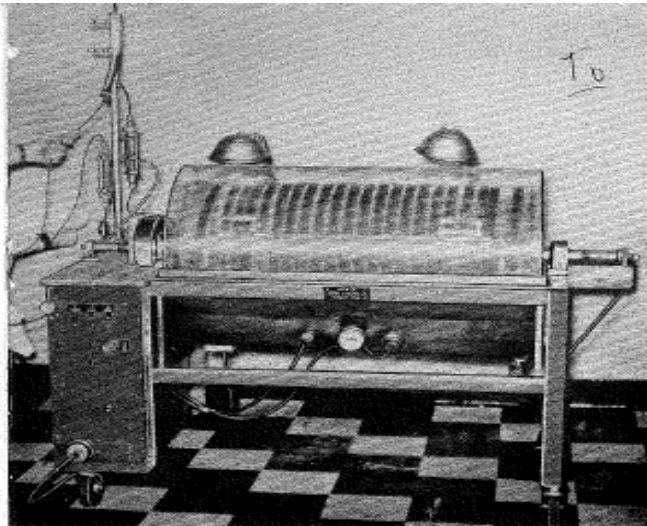
By NORMAN K. HOLLENBERG, M.D., PH.D., MURRAY EPSTEIN, M.D.,
RICHARD I. BASCH, M.D., JOHN P. MERRILL, M.D., AND ROGER B. HICKLER, M.D.

Circulation Research
Supplement 1 Vols XXIV and XXV ,
May 1969

Development of Hemodialysis and the PBBH

Kolff Artificial Kidney with rotating drum of aluminum slats and
an open dialysate bath
1942





The
**KOLFF-BRIGHAM
ARTIFICIAL KIDNEY**

DESIGNED AND MANUFACTURED BY
EDWARD A. OLSON COMPANY · Union Street, Ashland, Massachusetts, U.S.A.

Telephone TRINITY 5-4551

Examples of the Kolff rotating drum kidney crossed the Atlantic after the Second World War and landed at the Peter Brent Brigham Hospital in Boston, where they underwent a significant technical improvement. The modified machines became known as the Kolff-Brigham kidney, and between 1954 and 1962 were shipped from Boston to 22 other hospitals worldwide.

Clinical Application of the Artificial Kidney.

Trans Am Clin Climatol Assoc.
1949;61:19-24.

Thorn GW, Merrill JP, Smith S.

The use of an artificial kidney. I. Technique.

Clin Invest. 1950 Apr;29(4):412-24.

Merrill JP, Thorn GW, Walter CW,
Callahan EJ, Hollingsworth Smith Jr.

The use of an artificial kidney. II. Clinical experience.

J Clin Invest. 1950 Apr;29(4):425-38.

Merrill JP, Smith S 3rd, Callahan EJ, Thorn GW

The artificial kidney.

N Engl J Med. 1952 Jan 3;246(1):17-27.

Merrill JP.

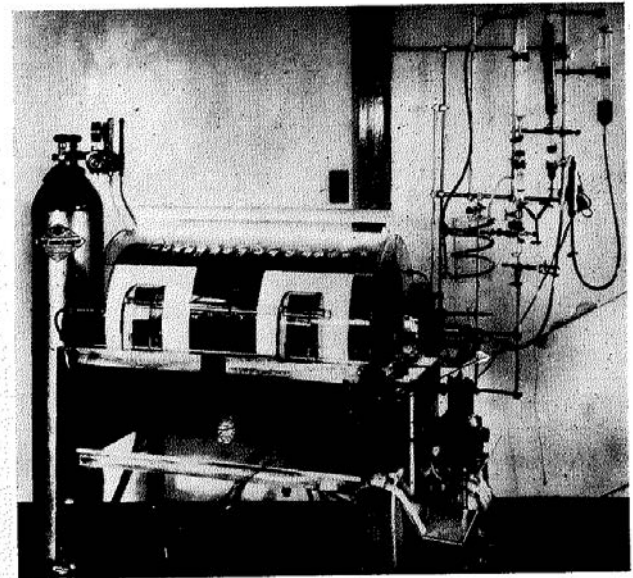
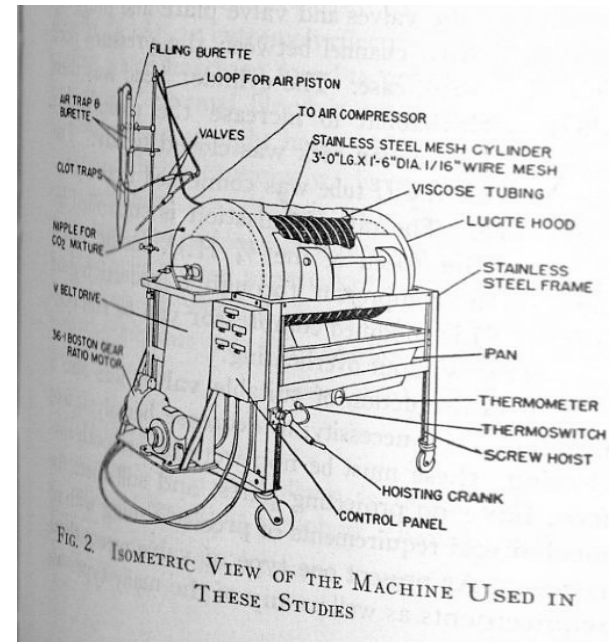


FIG. 1.—The Kolf-Brigham rotating drum artificial kidney as it was assembled for use in the early 1950's. Although the machine is more efficient than most types used today, it has largely been replaced with simpler, easier to operate models.

Kolff-Brigham Kidney ~1946-1955



At Peter Brent Brigham Hospital in Boston around 1949, Dr. Goodale, Barbara Coleman-Wysocki, RN, Dr. C. Rosoff, and Dr. John Merrill dialyze a patient with acute renal failure using a modified Kolff Rotating Durm Kidney Machine.



At Peter Bent Brigham Hospital in Boston in 1950, a team of nurses and physicians care for a young patient on dialysis

Kolff-Brigham Kidney in Korean War



Paul Teschan performing acute dialysis during the Korean War (1952)

Renal Transplantation and the PBBH

EXPERIENCES WITH RENAL HOMOTRANSPLANTATION IN
THE HUMAN: REPORT OF NINE CASES ¹

BY DAVID M. HUME, JOHN P. MERRILL, BENJAMIN F. MILLER, AND
GEORGE W. THORN

*(From the Departments of Surgery and Medicine, Harvard Medical School and the Peter
Bent Brigham Hospital, Boston, Mass.)*

(Submitted for publication April 14, 1954; accepted September 8, 1954)

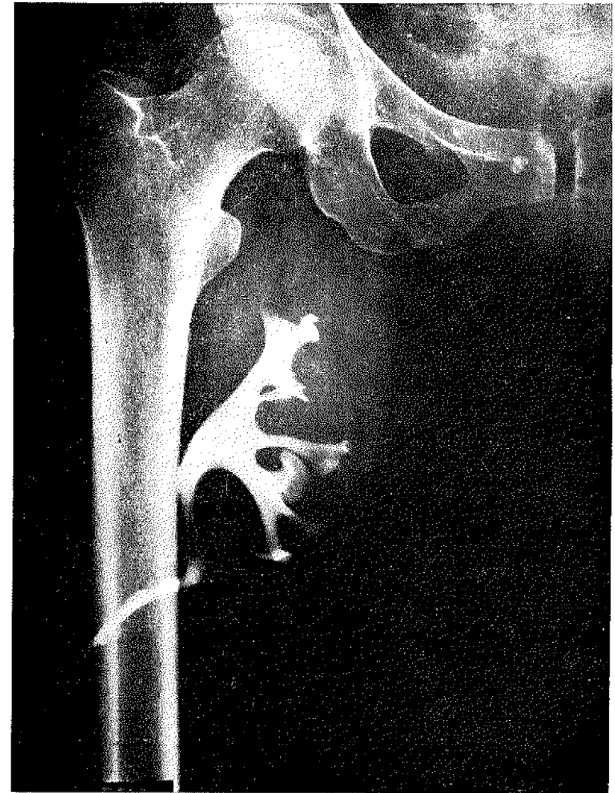
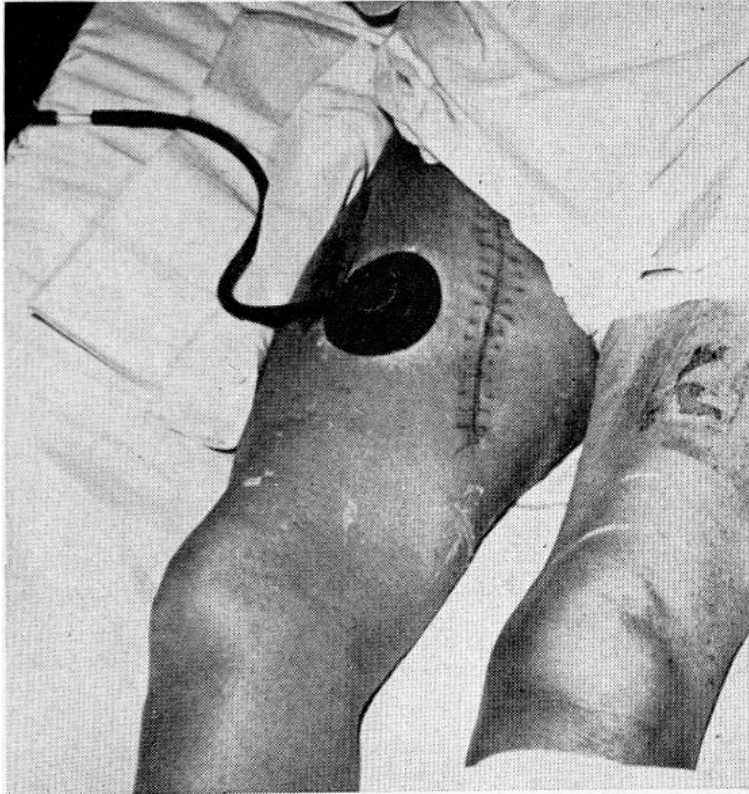
VOLUME XXXIV

FEBRUARY, 1955

NUMBER 2

The Journal of
Clinical Investigation

EDITED FOR THE AMERICAN SOCIETY FOR CLINICAL INV



SUCCESSFUL HOMOTRANSPLANTATION OF THE KIDNEY
IN AN IDENTICAL TWIN

By JOHN P. MERRILL, M.D. AND (*by invitation*) J. HARTWELL HARRISON,
M.D., JOSEPH MURRAY, M.D., AND WARREN R. GUILD, M.D.

BOSTON

TRANSACTIONS
OF THE
**American
Clinical and Climatological
Association**

THE SIXTY-EIGHTH ANNUAL MEETING

October 31, November 1, 2, 1955

The Homestead, Hot Springs, Virginia

VOLUME LXVII

Successful homotransplantation of the kidney in an identical twin.

Trans Am Clin Climatol Assoc. 1955-1956;67:167-73.
Guild WR, Harrison JH, Merrill JP, Murray J.
Boston MA

Successful homotransplantation of the human kidney between identical twins.

J Am Med Assoc. 1956 Jan 28;160(4):277-82.
Merrill JP, Murray JE, Harrison JH, Guild WR.



Figure 1. The participants in the world's first successful transplant. Seated (left to right) are Richard Herrick (the original transplant recipient) and his twin brother, Ronald (the kidney donor). Standing left to right, Drs. Joseph Murray, John P. Merrill, and J. Hartwell Harrison.

Experiences with renal homotransplantation in the human: report of nine cases.

J Clin Invest. 1955 Feb;34(2):327-82.

Hume DM, Merrill JP, Miller BF, Thorn GW.



Mrs. Wanda Foster with her children

Kidney transplantation between seven pairs of identical twins.

Ann Surg. 1958 Sep;148(3):343-59.

Murray JE, Merrill JP, Harrison JH.



Mrs. Edith Helm with her husband and children

Under the Auspices of The Board of Trustees

THE JOURNAL
of the
American Medical
Association

JAMA

VOL 185, NO 5, Aug. 3, 1963

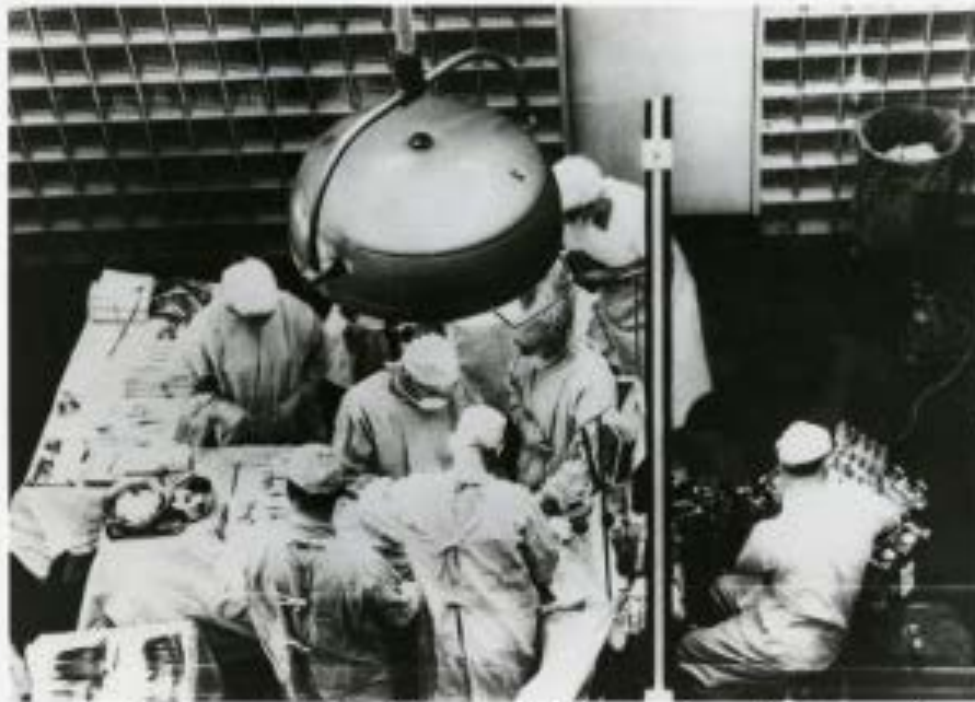
Successful Transplantation of Kidney from a Human Cadaver

*J. P. Merrill, MD, J. E. Murray, MD, F. J. Takacs, MD, E. B. Hager, MD,
R. E. Wilson, MD, and G. J. Dammin, MD, Boston*

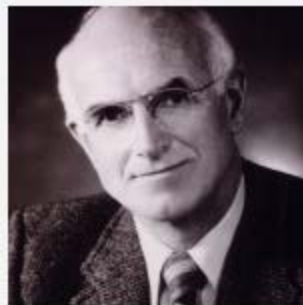


PETER BENT BRIGHAM KIDNEY TRANSPLANT TEAM: CIRCA 1965

J. Hartwell Harrison, John P. Merrill, David M. Hume, Joseph E. Murray



Joseph Murray (third from left), performing the first successful organ transplant at the Peter Bent Brigham Hospital, Boston, MA, December 23, 1954.



Dr. Joseph Murray

▮ The Nobel Prize in Physiology or Medicine 1990