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

J. Michael Lazarus, M.D.
1969-1996

February 28, 2013
John P. Merrill, M.D. (1917-1986)
Chief – CardioRenal Section
Peter Bent Brigham Hospital
Diagnosis of hypertension due to occlusions of the renal artery.
Margolin EG, Merrill JP, Harrison JH.

Renal circulation in congestive heart failure.
Merrill JP.
The Role of the Kidney in Human Hypertension

1. Failure of Hypertension to Develop in the Renoprival Subject

JOHN P. MERRILL, M.D.* and CARMELA SCHUPAK

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., 81: 931, 1961.)
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
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.
Thorn GW, Merrill JP, Smith S.

The use of an artificial kidney. I. Technique.

The use of an artificial kidney. II. Clinical experience.
Merrill JP, Smith S 3rd, Callahan EJ, Thorn GW

The artificial kidney.
Merrill JP.
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

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)
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.

Successful homotransplantation of the human kidney between identical twins.

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

Kidney transplantation between seven pairs of identical twins.
Murray JE, Merrill JP, Harrison JH.
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
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