

Dialysis

Studies completed at the University of Minnesota utilizing the Kolff Twin-Coil Dialyzer and a 385 Liter dialyzate recirculating reservoir yield some interesting information. Dialyzate bath composition for the larger tank was adjusted from the standard 100 Liter tank as follows:

lactic acid—108 cc.s
 dextrose—1925 grams
 sodium chloride—2195 grams
 sodium bicarbonate—1155 grams
 magnesium chloride—38.5 grams
 potassium chloride—116 grams
 calcium chloride—77 grams
 (city water contains 1.5 to 3.0 gm.)

Variations made according to patients' individual needs included greater concentrations of dextrose, lowered sodium, and lowered potassium. The following table reflects the results of this study:

Effect of Dialyzate Flow Rate on Dialysance

Notes from Miss Judy Martens

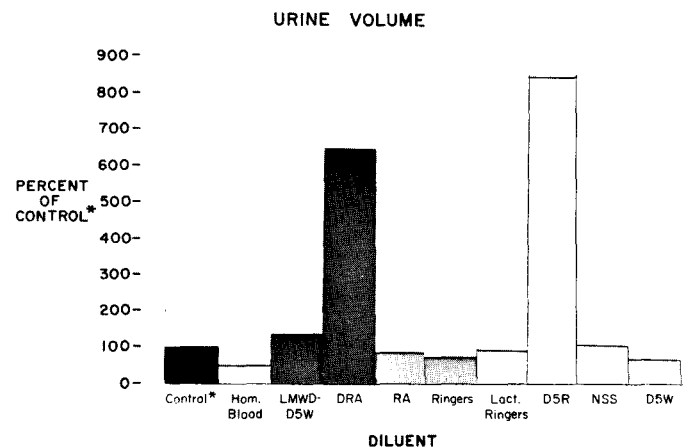
Dialyzate Flow Rate	BUN	Creatinine
3 L/min.	83 ml/min.	66 ml/min.
5 L/min.	95 ml/min.	75 ml/min.
10 L/min.	102 ml/min.	86 ml/min.
Blood flow rate: 180 - 220 ml/min.		

Hemodilution and Renal Function

Notes from Howard L. Gadboys

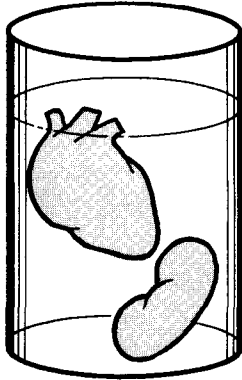
Considerable improvement in perfusion and postperfusion mortality and morbidity have resulted from the use of diluents to replace blood primes in large volume pump-oxygenating systems. The various diluents presently available are not in themselves inherently without dangers. Perfusion and postperfusion management must take cognizance of the specific deficits of each of the diluents and appropriate protective measures to be taken. These include overinfusion and buffering.

Moreover, the mere presence of a large volume of urine during and immediately after perfusion does not signify excellent renal function. In fact, renal function during perfusion, even with optimal hemodilution, is invariably depressed. However, primary renal failure following hemodilution perfusion is rare. Most difficulties with renal function are the result of inadequate cardiac output immediately after cardio-pulmonary bypass.

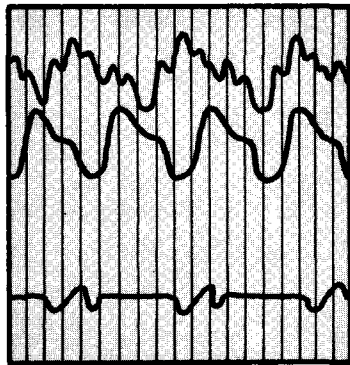


Oxygenation

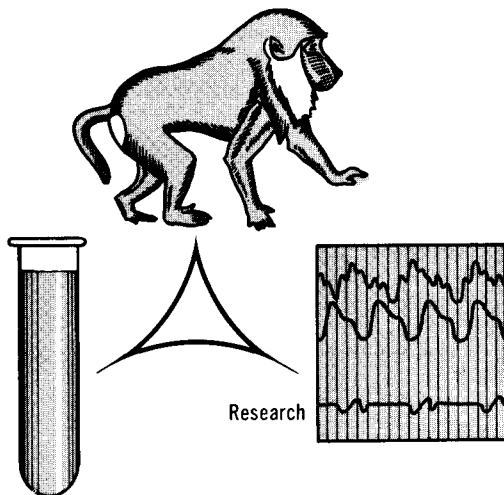
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Hemodynamics



Research

Dialysis

This department is devoted to the presentation of information concerning techniques, equipment, and their application to the patient in renal failure or who needs dialyzable impurities removed from the blood stream. Notes on acute and chronic dialysis, home dialysis, peritoneal dialysis, and the inherent techniques and equipment will be discussed.

**Hemodynamics—Specialty Notes on
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Concerned with the collection and processing of data from physiologic studies, this department is devoted to the presentation of notes gleaned from cardiac catheterization laboratories, clinical shock programs, angiographic laboratories, and other areas in which basic physiologic parameters are measured for diagnosis or the evaluation of treatment.

**Organs and Tissues—Specialty Notes on
Grafts and Artificial Replacements**

The responsibility of this department is to provide a medium for the discussion of techniques and equipment used in the handling of organs and tissues for transplantation and in the development and application of artificial organ and tissue replacements.

Oxygenation

To effectively provide a bulletin board for the display of information about the techniques and equipment necessary to oxygenate blood totally or regionally during surgery or chemotherapy is the purpose of this department.

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Notes, short reports, news, product releases, and abstracts of articles of interest from the literature as they pertain to experimental and clinical investigation, including information concerning the application of the Technology to animals is the area of responsibility for this department.