

"Congratulations to the American Society of Extra-Corporeal Technology on its first issue of the Journal."

BIO/SYSTEMS, INC.



VERNITRON CORPORATION



Artificial Kidney Systems
Santa Monica, California 90404

Increasing Coronary Flow By Means of Hemodilution

A possible adjunct in the treatment of acute myocardial infarction with hyperbaric oxygenation.

by ERNEST RUIZ, M.D.
Minneapolis Medical
Research Foundation
Minneapolis, Minnesota

Studies in our laboratory have shown that in acute normovolemic dextran 75 anemia in dogs cardiac output rises exponentially as the hemoglobin level falls. Although, in this acute situation, incomplete compensation for the decreased oxygen-carrying capacity of the blood results in some degree of hypoxia, coronary flow increases over and above the increase in cardiac output such that myocardial ischemia takes place only at very low levels of hemoglobin. This level seems to be around three to four grams hemoglobin.

Moreover, the great increase in cardiac output is accomplished without added energy expenditure of the heart until the hemoglobin falls to about four grams per-cent. This increase in cardiac efficiency is apparently due to both an increased myocardial contractility and decreased peripheral resistance.

It seems possible that this response could be used to advantage in the treatment of cardiogenic shock along with hyperbaric oxygenation since the problem is largely one of decreased cardiac output and decreased coronary flow due to a damaged, inefficient heart.

Technique Tips

Dietz van Dura uses a half of a disposable syringe container to back-up rubber sampling sites in artificial kidney circuits. This prevents the sampling needle from going through the tubing and possibly inflicting a wound in the one who is sampling (and who wants hepatitis?).

ACCESSORIES FOR HEMODIALYSIS

Three instruments have been designed by Sigmamotor to aid in Hemodialysis.

1 The SIGMAMOTOR ARTIFICIAL KIDNEY BLOOD PUMP for use with a Disposable Coil can be varied from 40 to 750 ml/minute.

2 SIGMAMOTOR REGIONAL HEPARINIZATION PUMPS are independently controlled with flow rates from 1.5 to 120 ml/hour.

3 LASHER-SIGMAMOTOR ARTIFICIAL KIDNEY MONITOR senses changes in pressure, detects bubbles and equipment failure in the hemodialysis system. If a change in normal conditions occurs the monitor will notify personnel, shut equipment down and clamp off the venous tube.

Write for literature.



LASHER
SIGMAMOTOR
ARTIFICIAL KIDNEY MONITOR

SIGMAMOTOR, INC.

95 North Main Street, Middleport, N. Y.
Phone: Area Code 716 RE 5-3411

EXTRA-CORPOREAL TECHNOLOGY