

Technic for Repeated Sampling of Venous Blood

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The taking of repeated samples of venous blood during the performance of various tolerance tests is often difficult because of the need of repeated venipunctures. This difficulty becomes more pronounced when dealing with children or adults with poor superficial veins or when the trauma of repeated venipuncture may adversely affect test results.

We have been using a simple technic which allows for adequate and frequent sampling and involves a single venipuncture.

Venipuncture is made with any commercially available pediatric scalp vein with attached tubing (21 gauge needle).^{*} Blood is sampled by attaching a syringe to the tubing and drawing back without use of a tourniquet. After completion of sampling, the tubing is flushed with a solution of 10 mg. heparin in 10 ml. of saline contained in a 10-ml. syringe. Care is taken to avoid infusing the solution itself intra-

venously. The syringe is left in place with the plunger taped to the barrel to prevent reflux of blood or accidental injection of the anticoagulant solution. The tubing used has a capacity of 0.23 ml. At the time of the next sampling, the heparin solution syringe is removed and blood flows spontaneously or is drawn into a collecting syringe. The first few milliliters are discarded and the sample then collected in a clean syringe.

By use of this technic, we have been able to do prolonged tolerance tests even on infants with the use of a single small vein.

An added advantage to this method accrues when hypoglycemic function studies are performed, since a patent indwelling needle is assured in the event glucose must be rapidly administered to terminate a severe reaction.

One additional factor to be considered in using this technic is that the constant infusion of fluids is avoided, particularly if the tolerance test is to be prolonged over many hours.

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^{*}Abbott, Winged Scalp Vein Infusion Set, 21-G Thinwall Needle, No. 4492.

BOOK REVIEW

ACCIDENT SERVICE. L. W. Plewes, Editor. \$21.00. Springfield, Illinois, Charles C. Thomas. 1966.

This book, published originally in England, is primarily a manual for the guidance of the hospital emergency room staff and of general practitioners in the treatment of accidents and surgical emergencies.

The section reviewed here is entitled "Diagnosis and Emergency Treatment of the Diabetic Patient." In seven pages of text it alerts the surgeon to the conditions he may encounter in which it is essential to look for the possible presence of diabetes and its complications. It instructs him in the diagnostic tests to be used and in the differential diagnosis of diabetic ketosis, diabetic coma and hypoglycemia, and in the preparation of the diabetic patient for emergency operations.

This chapter could no doubt be useful in the too numerous hospitals where emergency treatment of an accident case or of a coma patient can fall to an inadequately trained resident, and when a knowledgeable medical consultant is not available.

But one can only hope that the one-page outline of the treatment of diabetic ketoacidotic coma will not be the only resource available to the "accident surgeon who will usually have to initiate treatment and sometimes to continue it" and that he will find it possible to get a medical consultant, at least on the telephone if not at the bedside.

Treatment emphasis is, as it should be, on insulin, adequate insulin, controlled by serial blood sugars, but there is no mention of ketone tests either in the serum or in the urine during the intensive treatment phase as a guide to insulin dosage, nor are CO₂ determinations or electrolyte studies mentioned. Strangest of all, nowhere in the chapter does the text imply that the accident surgeon confronted with a traumatic emergency in a diabetic has a moral and a legal responsibility to call in a medical consultant if possible. The implication that the "accident surgeon," with the help of this book, should be able to handle the situation without doing so makes one wonder about the state of medicine under NHS.