

## MEDICINE

# Concentrated Blood Plasma Thought Best Remedy for Shock

## Swift and Dramatic Results Within a Few Minutes With Plasma Redissolved After Drying and Freezing

FOR rescuing soldiers or civilian patients from the dangerous condition of shock, concentrated blood plasma is the best remedy, four Texas physicians declare in a report to the American Medical Association. The physicians making the report, with results of this treatment in 45 cases, to the *Journal of the American Medical Association*, (Feb. 1) are Dr. J. M. Hill, Dr. E. E. Muirhead, Dr. C. T. Ashworth and Dr. W. D. Tigertt, of Baylor University College of Medicine.

Swift and dramatic results with this treatment were obtained, patients often recovering consciousness within a few minutes. The doctors believe it extends the scope of treatment of shock "to include cases otherwise unresponsive."

Concentrated plasma is better treatment for shock, they find, than transfusions of whole blood or of unconcentrated plasma, although in some cases whole blood is also required. Plasma is the fluid portion of the blood. Large quantities of this fluid plasma have been collected and shipped to England through the Red Cross. The concentrated plasma used by the Texas physicians was prepared by redissolving plasma that had been dried and frozen. In this way plasma four or five times more concentrated than normal can be obtained.

For military use, it is pointed out, concentrated plasma has technical advantages such as smaller bulk, perfect storage, simplicity and ease of its use, and swift results.

Advantages from the standpoint of treatment are said to be "even more significant." The chief aim in treatment of shock, regardless of its cause, is to restore the volume of blood circulating through the veins and arteries. Concentrated plasma does this immediately, it is stated, by drawing out of the body tissues fluid previously lost from the blood stream. Transfusion of blood, even in greater amounts than that lost in hemorrhage, does not always restore adequate circulation, it has been found, especially when shock has been severe and prolonged.

Keeping the amount of protein in the

blood up to normal level is also highly important. When concentrated plasma is given "larger amounts of protein can be more speedily placed in circulation than by any other method," the Texas doctors report.

Concentrated plasma also seems to have a direct stimulating effect on the tone of the blood vessels and their permeability.

The dangerously low blood pressure in patients in shock is raised to safe levels, usually immediately, and generally remains at a safe level, although in some cases more than one injection of about three ounces of four times concentrated plasma had to be given.

"Other shock phenomena also show dramatic changes," the Texas group reports. "Sweating, for example, may cease entirely before all of a dose of plasma is given, while return to consciousness from coma often occurs in a few minutes."

The safety of concentrated plasma is shown by the fact that reactions with fever following its use occurred only three times in 299 injections. Like most powerful remedies, however, it can be somewhat dangerous if misused. The Texas doctors warn that in patients with congestive heart failure it should not be given unless preliminary bleeding of more than four times the volume to be given is done.

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## GENETICS

## Natural Ear-Ring Holes Found in Two Families

HOLES in earlobes, looking as if pierced for ear-rings but actually "birthmarks," are described in a report sent to the American Genetics Association by Dr. Henry W. Edmonds of Children's Hospital, Boston, and Dr. Clyde E. Keeler of the Wistar Institute of Anatomy and Biology, Philadelphia. (*Journal of Heredity*, December.)

The holes do not go all the way through the ear, but consist of deep, narrow pits. In some individuals they start from both sides of the earlobe and nearly

meet in the middle; in others, they are on only one side of the lobe.

A naive explanation would be that these natural "piercings" are inherited from a long line of ancestors who have had their ears pierced for ear-rings. A more exact explanation is that they are hereditary, all right, but are not due to any artificial treatment of ancestors.

They have been found in two wholly unrelated family lines, one Italian, the other Russian, identified in the report only as the "Bo" and the "Kr" families. The "Bo" family started with grandparents both of whom had the peculiar markings. All their children (three sons, one daughter) were similarly marked, as were three granddaughters. Three grandsons do not have the natural "ear-ring holes."

The "Kr" family shows one great-uncle who had a deformed ear, although the pittings were lacking. All other members of first and second generations had normal ears so far as known. Then, in the third generation, four out of nineteen members of the cousinship have the natural piercings, and there are in addition two others who have ears otherwise abnormal.

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NOT ACQUIRED

Although this looks so much like the piercing for ear-rings, it is really a hereditary marking and is not due to any ear piercing in the ancestors. The photograph is from the *Journal of Heredity*.