compared to whole blood. For this reason alone, we would emphasize that in the rational management of patients in shock from trauma or burns, gelatin and plasma solutions should be reserved for purely emergency use. They can never be considered as true substitutes for whole blood."

A. W. F.

The Circulation in Traumatic Shock. Bull. U. S. Army Med. Dept. No. 87 (April) 1945.

"Important studies on the circulation in traumatic shock in man were summarized in a recent Harvey Lecture by Dr. D. W. Richards, Jr. The basic dynamic feature, failure of return of blood to the heart with diminished blood flow and tissue anoxia, long recognized from experimental evidence, can now be said to have been proved in human cases of shock. Direct measurements of the pressure of blood in the right auricle and of cardiac output were achieved by means of a long ureteral catheter introduced into a median basilic vein and thence passed along axillary and subclavian veins into the right auricle. Comprehensive studies were made on 92 patients admitted to Bellevue Hospital. . . .

"Evidence was summarized for a strongly selective vasoconstrictor mechanism in shock, shutting off almost completely large organ systems or regions of the body not immediately necessary for survival. In shock, while the total blood flow decreases to half the normal value, the blood flow through the kidney may decrease to one-tenth or one-twentieth, perhaps even less in extreme cases. One patient in deep shock for many hours developed acute renal insufficiency similar to the crush syndrome studied by Bywaters. Spontaneous and abrupt failure of this selective vasoconstriction may precipitate fatal collapse.

"The Trendelenburg, or foot-up, position increased the cardiac output in patients with moderate reduction of blood volume but was ineffectual when there was marked reduction of blood volume. Cardiac output was not increased by the administration of pressor amines. The effects of alcoholism superimposed on those of shock were most unfavorable. Fat embolism was not observed in the series. . . .

"Persistent shock was characterized by the accumulating effects of tissue anoxia. The brain appeared to fail first. Pulmonary edema was a frequent and difficult complication. Nitrogen retention and oliguria were also observed. The status of oxygen therapy needs further definition.

"When whole blood has been lost in large amounts, replacement by plasma alone will produce an acute anemia. This may actually limit the quantity of plasma that can be given safely. Failure of sustained improvement after the administration of 1,000 to 1,500 cc. of whole blood usually indicated continued bleeding. The author emphasizes the need for further studies on the subsequent maintenance of the patient after he has been resuscitated from shock."

A. W. F.

Special Shock Studies. Bull. U. S. Army Med. Dept. No. 87 (April) 1945.

"Special shock studies have been conducted by Majors D. Ebert and Charles P. Emerson on detached service with the auxiliary surgical group working in field hospitals. Their observations have been summarized in a recent report as follows: All patients with arterial pressure readings below 85 mm. of Hg, excluding cases with cerebral and cord injuries, were found to have an oligemia, the deficiency averaging 40 per cent of the expected normal total blood volume. A significant reduction in blood volume, i.e.,