

## Prothrombin Time in Hypertensives with Special Reference to Cerebral Accidents.

EUGENE DE SAVITSCH AND COURTNEY JENKINS.

*From the Laboratories, Home for Incurables, Washington, D.C.*

Recent work of Savacoll<sup>1</sup> and others has shown that the tendency for hemoptysis in pulmonary tuberculosis may be associated with prothrombin deficiency.

The present work was undertaken primarily to determine whether or not there is a relationship between the prothrombin time and cerebral accidents in hypertensives.

The general plan of experimentation was to study 2 approximately parallel groups of patients, one with and the other without cerebral accidents, and compare their prothrombin time under identical conditions.

Two groups of 8 male patients were selected from the inmates of the Home for Incurables. All the so-called complicated cases where the hypertension was associated with diabetes, lues, or some other extraneous factor were excluded from the study. Each patient was

subjected to thorough physical examination which included urinalysis, hemogram, Wassermann and Kahn, as well as NPN. The blood pressure was taken at frequent intervals, and the accompanying tables give us the average of several readings. The prothrombin time was determined according to the method of Smith and blood was collected at approximately the same time of the day. Hemoglobin values were determined by Photo-Electric Colorimeter.

**Summary and Conclusions.** The results in the accompanying tables are self-explanatory and indicate that there is no clear relationship between cerebral accidents and the prothrombin time in hypertensives. The prothrombin time in hypertensives shows upper limits of normal values without any definite diagnostic significance.

<sup>1</sup> Savacoll, J. W., *Am. J. M. Sc.*, 1941, **201**, 830.

TABLE I.  
Hypertensives Complicated by Cerebral Accidents.

|   | Age | Hgb. | RBC  | WBC    | NPN  | Pro. time | B.P.    |
|---|-----|------|------|--------|------|-----------|---------|
| 1 | 52  | 19.8 | 6.21 | 9.950  | 30.6 | 30        | 185/120 |
| 2 | 52  | 14.4 | 4.39 | 5.725  | 34.7 | 34        | 210/100 |
| 3 | 58  | 18.6 | 5.56 | 11.175 | 30.1 | 39        | 170/99  |
| 4 | 68  | 16.2 | 4.74 | 6.825  | 26.8 | 28        | 165/112 |
| 5 | 70  | 15.7 | 4.95 | 7.058  | 24.3 | 39        | 215/99  |
| 6 | 70  | 15.7 | 5.35 | 4.950  | 34.2 | 30        | 168/113 |
| 7 | 70  | 15.7 | 4.90 | 7.200  | 37.4 | 31        | 176/95  |
| 8 | 88  | 15.6 | 4.78 | 5.275  | 31.7 | 25        | 214/115 |

TABLE II.  
Hypertensives Without Cerebral Accidents.

|   | Age | Hgb. | RBC  | WBC   | NPN  | Pro. time | B.P.    |
|---|-----|------|------|-------|------|-----------|---------|
| 1 | 53  | 17.6 | 5.65 | 5.100 | 33.6 | 34        | 180/124 |
| 2 | 58  | 14.4 | 4.59 | 5.075 | 27.1 | 30        | 165/95  |
| 3 | 62  | 16.3 | 5.71 | 6.850 | 31.8 | 29        | 200/123 |
| 4 | 66  | 15.8 | 4.71 | 5.474 | 30.9 | 33        | 192/135 |
| 5 | 70  | 17.1 | 5.84 | 5.250 | 29.5 | 36        | 162/110 |
| 6 | 72  | 16.3 | 5.18 | 7.800 | 36.2 | 31        | 143/101 |
| 7 | 76  | 12.9 | 4.13 | 5.350 | 49.6 | 28        | 155/135 |
| 8 | 77  | 15.2 | 4.60 | 6.475 | 26.3 | 31        | 159/104 |

Hgb.—Hemoglobin in g.  
RBC—Erythrocytes.  
WBC—Leucocytes.

NPN—Non-Protein Nitrogen.  
Pro. Time—Prothrombin Time.  
B.P.—Blood Pressure.