

# A New Bedside Technic

FOR THE DETERMINATION OF THE CLOTTING POWER OF BLOOD IN PATIENTS HAVING VITAMIN K DEFICIENCY. . . . .

## TECHNIC OF TEST

- 1-PLACE 0.1cc OF THROMBOPLASTIN IN 10x75mm. TUBE
- 2-DRAW BLOOD FROM PATIENT IN ORDINARY SYRINGE
- 3-ADD BLOOD TO 1cc. LEVEL OF TUBE
- 4-MIX BY INVERTING OVER FINGER.
- 5-DETERMINE TIME NEEDED TO FORM CLOT

## CALCULATION

$$\frac{\text{CLOT TIME OF NORMAL CONTROL}}{\text{CLOT TIME OF PATIENT}} \times 100 = \text{CLOTTING POWER.}$$

- PROTHROMBIN LEVEL REDUCED IN
- 1-OBSTRUCTIVE JAUNDICE
  - 2-BILIARY FISTULA
  - 3-LIVER DAMAGE
  - 4-HEMORRHAGIC DISEASE OF NEWBORN

## Summary

- 1-BLOOD IS TREATED WITH AN "EXCESS" OF THROMBOPLASTIN
- 2-THIS ELIMINATES THROMBOPLASTIN AS A VARIABLE
- 3-WHERE THE PROTHROMBIN LEVEL IS LOW AND OTHER FACTORS NORMAL, THE TEST, LIKE THAT OF QUICK'S, IS A MEASURE OF PROTHROMBIN
- 4-IT IS A RELIABLE TEST FOR THE CONTROL OF VITAMIN K THERAPY
- 5-THIS IS A SIMPLE TEST WHICH CAN BE PERFORMED AT THE BEDSIDE

### VITAMIN K THERAPY IN CASE OF OBSTRUCTIVE JAUNDICE



1-NORMAL PROTHROMBIN LEVELS IN THIS CASE WERE 100% (NORMAL) UNTIL 2-10-34  
 2-PROTHROMBIN DROPPED TO 25% (NORMAL) ON 11-10-34  
 3-ON 12-10-34 PROTHROMBIN LEVEL RISED TO 75% (NORMAL) ON 12-10-34  
 4-ON 1-10-35 PROTHROMBIN LEVEL RISED TO 100% (NORMAL) ON 1-10-35

### VITAMIN K THERAPY IN CASE OF BILIARY FISTULA



1-ON 1-10-34 PROTHROMBIN LEVEL IN THIS CASE WAS 100% (NORMAL) UNTIL 2-10-34  
 2-ON 3-10-34 PROTHROMBIN LEVEL DROPPED TO 25% (NORMAL)  
 3-ON 4-10-34 PROTHROMBIN LEVEL RISED TO 75% (NORMAL)  
 4-ON 5-10-34 PROTHROMBIN LEVEL RISED TO 100% (NORMAL)

### VITAMIN K THERAPY IN CASE OF BILIARY FISTULA

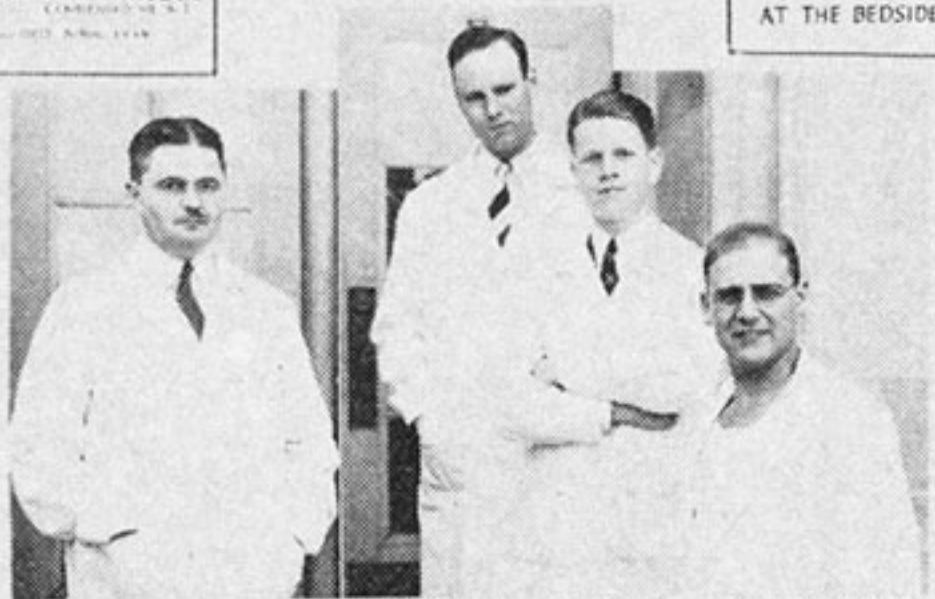


1-NORMAL PROTHROMBIN LEVELS IN THIS CASE WERE 100% (NORMAL) UNTIL 2-10-34  
 2-ON 3-10-34 PROTHROMBIN LEVEL DROPPED TO 25% (NORMAL)  
 3-ON 4-10-34 PROTHROMBIN LEVEL RISED TO 75% (NORMAL)  
 4-ON 5-10-34 PROTHROMBIN LEVEL RISED TO 100% (NORMAL)

### VITAMIN K THERAPY IN CASE OF OBSTRUCTIVE JAUNDICE



1-NORMAL PROTHROMBIN LEVELS IN THIS CASE WERE 100% (NORMAL) UNTIL 2-10-34  
 2-ON 3-10-34 PROTHROMBIN LEVEL DROPPED TO 25% (NORMAL)  
 3-ON 4-10-34 PROTHROMBIN LEVEL RISED TO 75% (NORMAL)  
 4-ON 5-10-34 PROTHROMBIN LEVEL RISED TO 100% (NORMAL)



... H. P. SMITH ... G. R. HOFFMAN ... C. A. OWEN ... S. E. ZIFFREN ...

## MECHANISM OF BLOOD CLOTTING



## MANUFACTURE OF THROMBOPLASTIN

- 1-MAIN PART OF HEAD OF EARLY IN CL AND LATE STAGES
- 2-EXACTLY OPPOSITE HAND WITH LONG BEAK OF SALES
- 3-HEAD OR VERTICALLY BY SHARPENED POINT
- 4-HEADS TWO BEAKS OF NE ONLY

## PROTHROMBIN LEVELS IN EARLY STAGES (APPROXIMATE CASES)

PROTHROMBIN LEVEL (%)	0	25	50	75	100
1	134	110	36	—	—
2	172	90	44	5	—
3	6	35	22	8	—
4	28	25	30	40	—
5	63	60	36	56	—
6	97	80	40	—	—
7	140	100	31	—	—
8	120	—	42	—	—
9	104	100	33	—	—
10	118	—	25	—	—
11	159	—	41	—	—

1-ON 1-10-34 PROTHROMBIN LEVEL IN THIS CASE WAS 100% (NORMAL) UNTIL 2-10-34  
 2-ON 3-10-34 PROTHROMBIN LEVEL DROPPED TO 25% (NORMAL)  
 3-ON 4-10-34 PROTHROMBIN LEVEL RISED TO 75% (NORMAL)  
 4-ON 5-10-34 PROTHROMBIN LEVEL RISED TO 100% (NORMAL)