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| Collection: | Horace L. Hodes, MD Papers, 1930-1987 |
| Box: | 1 |
| Folder: | 80 |
| Folder Title: | Pancreatic Fibrosis – Research material, 1948 |
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The gelatin film test is performed as follows: A 1/5 dilution is made by adding sufficient quantity of feces to 4 ml. of distilled water in a test tube with a graduation mark at 5 ml. Further dilution can be made as desired. One large drop (approximately 0.1 ml.) of the well mixed specimen is placed on an unfixed x-ray gelatin film such as is used in routine hospital practice. The film strip may be clipped to a cardboard to prevent curling. The film is incubated at 37°C for one hour. (Although 37°C is recommended, room temperature is satisfactory if the incubation period is prolonged to 1½ to 2 hours.) After incubation the film is washed in a stream of cold water with gentle rubbing. The result is now apparent. A clearing at the site of the drop indicates enzyme activity. A complete clearing is designated as 4+, and a slight clearing, only at the edge of the drop as 1+. If the drop is small, or if the concentration of the specimen is too great, the material will dry and cake. A normal control, as well as a control of the diluent should be used for comparison. Proper bacteriological precautions should be taken when dealing with cases suspected of enteric infections. We have routinely used both a 1/5 and a 1/10 dilution of stool.

December 1, 1948

Harry Shwachman, M.D.
Paul R. Patterson, M. D.

Table 1

Stool trypsin in normal and sick individuals
exclusive of pancreatic fibrosis, arranged
according to age.

| | <u>No. of cases</u> | <u>Positive trypsin</u> | | <u>Negative trypsin</u> | |
|---------------|---------------------|-------------------------|----------|-------------------------|----------|
| | | No. of cases | Per cent | No. of cases | Per cent |
| Prematures | 28 | 28 | 100 | | |
| Infants | 233 | 233 | 95.7 | 10 | 4.3 |
| 2 - 5 years | 133 | 117 | 88.0 | 16 | 12.0 |
| 5 - 10 years | 74 | 40 | 54.0 | 34 | 46.0 |
| Over 10 years | <u>32</u> | 8 | 25.0 | 24 | 75.0 |
| | 500 | | | | |

Table II

Stool trypsin in patients with Pancreatic Fibrosis

| | <u>No. of Cases</u> | <u>Positive trypsin</u> | <u>Negative trypsin</u> |
|---------------|---------------------|-------------------------|-------------------------|
| Infants | 29 | 7 | 22 |
| 2 - 5 years | 13 | 0 | 13 |
| 5 - 10 years | 7 | 0 | 7 |
| Over 10 years | <u>1</u> | <u>0</u> | <u>1</u> |
| | 50 | 7 | 43 |

Table III

Relation of number of stools examined to findings in pancreatic fibrosis.

| No. of patients examined | No. of stools examined of each | No. of negative stool trypsin | No. of positive stool trypsin |
|--------------------------|--------------------------------|-------------------------------|-------------------------------|
| 3 | 1 | 3 | 0 |
| 17 | 2 | 32 | 2 |
| 12 | 3 | 31 | 5 |
| 6 | 4 | 24 | 0 |
| 3 | 5 | 15 | 0 |
| 2 | 6 | 11 | 1 |
| 2 | 7 | 13 | 1 |
| 2 | 10 | 20 | 0 |
| 1 | 12 | 12 | 0 |
| 1 | 18 | 18 | 0 |
| <u>1</u> | <u>22</u> | <u>20</u> | <u>2</u> |
| 50 | 220 | 209 | 11 |

Table IV

Data from seven cases of pancreatic fibrosis with positive findings.

| <u>Patient No.</u> | <u>No. of stools examined in each patient</u> | <u>No. negative stool trypsin</u> | <u>No. positive stool trypsin</u> |
|--------------------|---|---------------------------------------|---------------------------------------|
| 27 | 22 | 20 | 2 |
| 47 | 7 | 6 | 1 |
| 21 | 6 | 5 | 1 |
| 17 | 3 | 2 | 1 |
| 36 | 3 | 2 | 1 |
| 46 | 2 | 0 | 2 |
| <u>48</u> | <u>3</u> | <u>0</u> | <u>3</u> |
| 7 | 46 | 35 | 11 |