

blood, can be separated into two distinct groups of cells; one corresponding to the clasmatocytes or histiocytes of the spleen and connective tissues and the other to the monocytes of spleen and circulating blood. In all of these experiments we have found no evidence of any transformation of serosal lining cells into other types of cells; whenever seen, the serosal cell is entirely characteristic whether in a normal, stimulated, or degenerating condition. We have also made a few observations on the subcutaneous tissue after the introduction of blood, on the omentum and on the phagocytic cells obtained from the lung. In general here also we have been able to differentiate the same two types of cells.

168 (2400)

Clinical experience with the active principle of cod liver oil.

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Between the end of December, 1922, and the end of May, 1923, an attempt was made to determine the anti-rachitic activity in infancy of the active principle of cod liver oil¹ prepared in the Department of Pathology at the College of Physicians and Surgeons.

For this purpose two similar groups of infants were observed in the Out Patient Department of Bellevue Hospital. All the infants in one group received the active principle, those of the other serving as controls. In general each child had a monthly physical examination and an x-ray of the wrists. Their homes were visited regularly and classified *one, two, three* or *four* according to the number of rooms, how many were light or dark, and how much the infants were out of doors.

* Introduced by T. F. Zucker.

¹ Zucker, T. F., Pappenheimer, A. M., and Barnett, M., *PROC. SOC. EXP. BIOL. AND MED.*, 1922, xix, 167; Zucker, T. F., *PROC. SOC. EXP. BIOL. AND MED.*, 1922, xx, 136; Zucker, T. F., and Matzner, M. J., *PROC. SOC. EXP. BIOL. AND MED.*, 1923, xxi, 186.

The active principle was administered in tablet form and, later on, dissolved in olive oil, the latter being the method of choice because the tablets, though active when fresh, sometimes lost some of their power, possibly because of drying.

All judgment as to the presence of rickets or healing is based on x-ray findings.

The following results were obtained: The homes of the control group were equally divided between classes *two* and *three* whereas those of the treated group were one and one-half times as many in classes *three* and *four* as in class *two*. In both the treated and control groups there were from two to three times as much rickets in classes *three* and *four* as in class *two*.

Sixty per cent of the treated group had rickets and only 35 per cent of the control group. Ninety-four per cent of all the rickets cases in the treated group showed healing and showed it so early as to be directly contrary to the season's expected influence. Sixty-six per cent of the rickets cases in the control group showed healing but so late as to be entirely accounted for by the season's influence.

Thirty-seven per cent of the non-rachitic cases in the treated group showed increased calcification and but 9 per cent of the controls.

It is believed that these facts prove beyond a doubt that the active principle of cod liver oil, already shown to be active in rat rickets, is also active in infantile rickets.

169 (2401)

Observations on the mechanism of complete heart block in man.

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Observations were made in eight cases of complete heart block; and the findings in five cases, admitted previously to Bellevue Hospital, were used as material. Over 300 electrocardiographic tracings of one minute duration were analyzed.