

7359 C

Leucocytes in the Saliva in Normal and Abnormal Subjects.

D. J. STEPHENS AND EDGAR JONES.* (Introduced by W. S. McCann.)

From the Department of Medicine, University of Rochester School of Medicine, and the Medical Clinic of the Strong Memorial and Rochester Municipal Hospitals, Rochester, N. Y.

During a study of the physiologic variations of the white blood cells of normal individuals¹ in which enumerations of the circulating leucocytes were made at 15 minute intervals over a period of several hours, simultaneously the salivary leucocytes were counted in an attempt to correlate and interpret changes which might be observed. In all, 367 such observations were made of 20 normal individuals. The observations were then extended to 145 determinations of 17 patients with a variety of pathological conditions. The salivary leucocytes were counted according to the method described by Isaacs and Danielian.² In making white blood cell counts of blood drawn from the ear, the method previously described¹ was used, in which, by counting 4 times the usual number of cells, the probable error was found to be about ± 230 cells.

Our observations of the number of salivary leucocytes in normal individuals are in essential agreement with those of Isaacs and Danielian. In more than 50% of the subjects, the number of salivary leucocytes was below 25 cells per cu. mm.; counts of from 500 to 1000 or more cells per cu. mm. were occasionally observed.

However, in our data, there is no apparent correlation between the number of the white cells in the blood and those in the saliva. The salivary leucocyte counts were fairly uniformly scattered over a series of individuals whose range of white blood cell counts was from 4,000 to 12,000 per cu. mm. Marked fluctuations were found in the salivary count without any significant change in the leucocytes of the peripheral blood and vice versa. When fluctuations occurred in both counts during the same interval there was no consistent relationship of one to the other. Neither in individuals nor in the entire group was there evidence of a consistent reciprocal relationship between the numbers of leucocytes in the saliva and peripheral blood.

* This investigation was aided in part by a grant from the Josiah Macy, Jr., Foundation.

¹ Jones, E., Stephens, D. J., Todd, H., and Lawrence, J. S., *Am. J. Physiol.*, 1933, **105**, 547.

² Isaacs, R., and Danielian, A. C., *Am. J. Med. Sci.*, 1927, **174**, 70.

Salivary counts and white blood cell counts were taken simultaneously in 5 cases of myelogenous leucemia, during treatment with Roentgen ray irradiation and with Fowler's solution. Marked fluctuations which occurred in the white blood cell counts of these individuals were not accompanied by any consistent change in the number of salivary leucocytes. Further, no constant relationship between leucocytes of saliva and peripheral blood were seen in observations made in other pathological conditions, including agranulocytic angina, thrombocytopenic purpura with chronic granulocytopenia, carcinoma of stomach, carcinoma of breast, Hodgkin's disease, lymphatic leucemia and lobar pneumonia.

Similar conclusions were reached by Elliott and Jenkinson,³ who followed the saliva of patients with myelogenous leucemia treated with irradiation.

Conclusions. In a series of 512 enumerations of leucocytes in saliva and peripheral blood in 20 normal and 17 abnormal individuals, no correlation has been observed between the total number of white blood cells in the peripheral blood and in the saliva.

7360 C

Comparative Pharmacology of Isomeric Saligenins and Their Bromine Derivatives.

DAVID I. MACHT AND H. A. B. DUNNING, JR.

From the Chemical and Pharmacological Research Laboratories, Hynson, Westcott & Dunning, Inc., Baltimore.

Macht and Dunning described the chemical and physiological properties of mono-brom-hydroxy-benzyl alcohol, or mono-brom-saligenin.¹ This compound, which has been named *Bromsalizol*, was the mono-brom derivative of ortho-hydroxy-benzyl alcohol. Inasmuch as 3 isomers of saligenin with the hydroxyl OH and benzyl CH₂OH groups in the ortho, meta and para positions, respectively, are possible, they and their mono-brom derivatives were prepared in these laboratories and investigated with regard to their comparative pharmacology. The structural formulae of the 3 saligenin isomers and their corresponding mono-brom derivatives are as follows:

³ Elliott, A. R., and Jenkinson, E. L., *Med. Clinics of N. Am.*, 1933, **17**, 327.

¹ Macht and Dunning, *PROC. SOC. EXP. BIOL. AND MED.*, 1934, **31**, 465.