

of the red corpuscles due to the heightened activity of the destroyers: as a result of the destruction, and the great need of new corpuscles, the blood shows young and often immature forms of corpuscle. Lintvarev sees in the overproduction of phagocytes in tuberculous and syphilitic states, the main cause of the anemia produced, as well as the lesions of spleen and liver to which reference has been made. The happy term "*phagocytes à tout faire*" is employed to designate the erythroblasts.

Experimental Goitre and Cardiac Hypertrophy from Suspected Water Sources.—BIRCHER (*Deutsch. Zeitschr. f. Chir.*, 1911, cxii, Nos. 4 to 6) has demonstrated the possibility of causing struma in rats by causing them to drink water of the particular geological sources that are known to cause it in human beings. His series embraced 120 animals, was carefully controlled, and consisted of animals from various districts. Against 120 successful attempts in producing goitre, there was not a single tumor found in the control animals, and histological examination leads Bircher to state that the conditions are strictly parallel. With continuance of the use of the water concerned the cellular degenerations were readily observed; nodular and diffuse change were observed in the thyroid, and hypertrophy of the heart accompanied by degeneration in its muscle.

Typhoidal Bacteriemia with Localization in the Lung.—That we do well to consider typhoid fever as a bacteriemia with localization in the intestine is evidenced by a case carefully reported by COURMONT, SAPP, and CHARLET (*Jour. de Physiol. et de Path. Générale*, March 15, 1912, xiv, No. 2) in which there were no intestinal symptoms, but a continued and severe purulent bronchitis. The malady began in a woman, aged thirty-eight years, with continued fever, torpor, enlarged spleen, and a slight ulceration on one anterior pillar of the pharynx. A very irregular fever, with large regressions, lasting more than three months, followed. The pulse was rapid, and the pulmonary symptoms marked; purulent sputum was present in great quantity; there was frequent cough, dyspnea without cyanosis, no consolidation, but numerous rales in all parts of the lungs. Albuminuria was marked. Headache and diarrhea were absent, the tongue was furred but the appetite continued fairly good. Blood cultures, at first unsuccessful, later at various times gave the bacillus typhosus, typical even in agglutination. Later, the bacteria appeared in the urine. The Widal reaction appeared on the eighth day. No rose spots were seen at any time. A large bed sore occurred. After a desperate illness, during the course of which the patient was operated upon for strangulation of a preëxistent hernia, she made a perfect recovery.

Antityphoidal Immunization by the Intestinal Tract.—COURMONT and ROCHAIX previously demonstrated the possibility of antityphoidal immunization in animals by the intestinal route, and have now applied it to man (*Jour. de Phys. et de Path. Gén.*, xiv, No. 2). The vaccine was given, with ladanum, by the rectum, and in no case was there any bodily reaction. In the blood, the agglutinative, bacteriolytic, and bactericidal properties appeared in due time, attaining their maximum three weeks after the first of three injections at intervals of five days.

The agglutinative and bacteriolytic powers were surpassed by the bactericidal, and the three varied from time to time, the curves not being parallel; all were demonstrable six months later, although attenuated: they soon disappeared thereafter. The time of their appearance and their duration were about the same as in subcutaneous inoculation, but the degree of power was scarcely so high.

The Source and Development of Generalized Tuberculosis.—JUNGELUNAS (*Zeits. f. Hyg. u. Infekt.*, lxxi, Hft. 2), publishes an extensive series of experiments upon the vexed question of the routes by which tubercle bacilli enter the organism. His results conform in general to what are the most widely accepted ideas. Guinea-pigs exposed to the inhalation of dry and moist cultures showed implication first of the thoracic organs, whose infection was both direct and also indirect through the walls of the mouth cavity and throat. Infection occurred alike easily if moist or dried cultures were used. Through these walls, the quickest mode of infection was the introduction of emulsion of bacilli into the mouth; while from the lumen of the intestine the disease could be readily caused if a great number of bacilli were introduced. The introduction of an emulsion of bacilli of the human type into the intestine failed to infect; on the contrary, infection was obtained by the introduction of an emulsion of bovine bacilli, especially by way of the mouth and throat: bovine bacilli were apparently able to infect from the intestine only if a large quantity was used. Human bacilli in the mouth cavity of sucking pigs, goats, and sheep failed to infect, while bovine bacilli succeeded readily under like circumstances. In the above mentioned animals, the unwounded wall of the gastrointestinal tract seemed to be a strong, but not insurmountable barrier against the passage of bacilli: the appendix and the sacculus rotundus of the rabbit showed the weakest resistance. Jurgelunas feels justified in reasserting strongly the nonidentity of human and bovine types of the bacillus, and considers the rabbit and the sucking pig as the best subjects for their differentiation.

A New Japanese Publication.—We welcome the appearance of the first volume of the Proceedings of the Japanese Pathological Association, which met in April, 1911, in Tokyo. The Proceedings appear, some in German, some in English, and the greater part in Japanese. The main general subject discussed was "*Schistosomiasis japonica*," to which a symposium was devoted.

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