

carefully looked for. The former has hitherto been found only in connection with osteomalacia, but there is very little doubt that it is excreted under other conditions of the system as well. It has distinctive chemical properties, and, like peptone when it occurs alone, can easily be identified; thus it is soluble in strong nitric acid, precipitated by dilute acid and by warming, but the precipitate produced by warming the liquid is dissolved on boiling, and is again precipitated on cooling. It is not precipitated by acetic acid or carbonic acid like serum-globulin.

A urine giving no precipitate with heat, nitric acid, or picric acid, but yielding a marked opacity with phospho-molybdic or phospho-tungstic acids and acetic acid after the urine has been clarified by precipitation with neutral lead acetate, indicates that it contains peptone.

Ralfe's well known test reacts when considerable peptone is present, but it is not decided enough to detect traces. It is made by floating the suspected urine on a few c.c. of Fehling's solution in a test-tube. Above the line of phosphates, if there is much peptone, a delicate rose-colored halo appears. If albumen be also present, it assumes a purple tint.

Hofmann, Senator and others contend that peptone is present in every albuminous urine. It is not, however, always found associated with morbid conditions of the urine, but may occur in urine otherwise quite normal. Its clinical significance is only now being fully elaborated. It may be generally stated, however, that its presence in urine is frequently associated with hyperpyrexia, with purulent exudation, or with the disintegration of pus cells somewhere in the body. In one set of cases it seems to be associated with a disorganization *en masse* of the leucocytes, as in typhus fever, diphtheria, tertiary syphilis, smallpox, phosphorus poisoning, etc. In another set of diseases it is associated with local inflammatory affections that have a tendency to become purulent—*e.g.*, pleurisy, pneumonia, abscess, parotitis, etc. In twelve cases of rheumatic effusion, J. von Jaksch found peptonuria present, and generally he regards it of great diagnostic value in doubtful cases between simple and purulent exudation. He is not strongly