

*Peptonuria.*

The readiness with which the presence of peptone in the urine can be detected has led to further interesting observations regarding the production and fate of this substance. The latter has been further investigated by Hofmeister, to whom much of our knowledge on the subject is due. A solution of .3 or .6 gramme was injected into the blood of rabbits; about four-fifths appeared in the urine, but less if the peptone was injected under the skin. If larger quantities are given the effect is to cause a considerable fall in the blood pressure, which interferes with the excretion of the urine; but if the animal were killed, from 4 to 14 per cent. of the ingested quantity was found in the kidneys, while the blood contained only a trace. These large quantities (from one to nine grammes) had a considerable narcotic action. The practical question underlying these researches is the difference in the destination of the peptone absorbed from the alimentary canal and in that absorbed from the skin. Hofmeister believes that the lymph cells with which, during digestion, the adenoïd tissue of the intestinal mucous membrane is filled, unite with the peptone and convey it into the blood, so that it passes through the circulation without being excreted by the kidneys. In harmony with this view is the fact which he has ascertained that during digestion a considerable quantity of peptone is accumulated in the wall of the bowel. According to this theory the colourless blood-corpuscles play a similar part in the supply of albuminous substances to the organism to that of the red blood-corpuscles in the supply of oxygen. It has been ascertained by Jaksch that peptone is frequently present in the urine in acute rheumatism. In twelve cases it was found during the course and subsidence of the joint affection. The more numerous the joints inflamed, the larger was the amount of peptone in the blood, and it was also increased in proportion to the rapidity with which the joint effusion was absorbed, either spontaneously or by the aid of salicylic acid. When the effusion had disappeared the peptonuria also ceased, but returned if a new effusion occurred, as soon as this began to subside.

This fact seems to be analogous to those observed by Hofmeister and Maixner on the occurrence of peptonuria during the absorption of purulent effusions, pneumonic infiltrations, and the like. It is probable that peptone is contained in the corpuscular elements in joint effusions, and that when these corpuscles pass into the blood rapidly and are destroyed, the peptone is liberated and appears in the urine. The same observer has recorded another very remarkable case of peptonuria. A female, aged twenty-seven years, had suffered all her life from a dermoid cyst of the ovary. The cyst had recently undergone a remarkable increase in size, apparently, from the resonance which was developed, in consequence of decomposition attended by the formation of gas. This was accompanied with grave illness and obstinate constipation. The tumour rather suddenly shrank, and the urine, which before had contained only a trace of albumen and no peptone, immediately became loaded with peptone, and continued so until the death of the patient a fortnight later. The section showed a bilocular dermoid cyst, adherent in many places to the intestines, and containing a quantity of gas, with fetid pulpy masses. In the latter were hair, epithelium, and plates of cholesterin. Similar masses were found in the abdominal cavity. The peptonuria was in this case apparently due to the bursting of the tumour, in consequence of which peptone was absorbed from the decomposing purulent masses in the abdominal cavity. The rupture became occluded, and the tumour again enlarged.—*Lancet*, Dec. 10, 1881.