

WHERE IS UREA FORMED?

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THE above question is asked by Dr. M. Foster in the last edition of his text-book of physiology, and as the weight of evidence appears to favour the idea that the liver is the chief organ concerned in producing these changes in the products of decomposition of nitrogenous matter resulting in the formation of urea, I would feel obliged by your publishing the following observations, which appear to have a direct bearing on this point.

An European, while under treatment for abscess of the liver, died rather suddenly and unexpectedly. On *post-mortem* examination, it was found that a hepatic abscess had burst into the right pleural cavity and into the transverse colon. Sixty-eight ounces of pus were removed from the former situation, and the gut at the hepatic flexure was full of pus. The abscess-cavity, which contained such a quantity of matter, was necessarily of large dimensions, and the small portion of liver texture remaining was in a diseased condition, being soft and easily broken down.

The urine was collected on the seventh, sixth, and third days preceding death, and examined for urea by Russell and West's method, with the following results:—

	Amount of urine collected.	Sp. gr. of urine.	Amount of urea in grains.
7th day	40 oz.	1022	598.63
6th "	40 "	1020	563.42
3rd "	16 "	1024	295.14

In another case, an abscess burst into the bowel, and large quantities of matter were passed per anum. Two days afterwards, a second abscess appears to have opened into the right lung—the symptoms being great difficulty of breathing, with profuse expectoration of purulent matter. The patient died on the 12th January. A *post-mortem* examination could not be obtained. The amount of urea found in the urine collected, was as follows:—

	Amount of urine collected.	Sp. gr. of urine.	Amount of urea in grains.
2nd Jany.	29 oz.	1021	510.5
4th "	24 "	1024	401.45
5th "	28 "	1025	468.28
6th "	35 "	1022	565.75
7th "	25 "	1023	473.41
11th "	25 "	1022	616.28

The diet in both these cases was highly nitrogenous, consisting of three pints of milk, four to six eggs, jugged chicken soup frequently, in twenty-four hours, with four to six ounces of whisky. Chloride of ammonium was not administered.

The ordinary amount of urea excreted by hospital patients, with no hepatic complications, and in full hospital diet, is about 240 grains.

Two patients, suffering from an eruption of boils, but who were otherwise in what appeared to be very robust health, passed daily 545 and 584 grains of urea. They were both large meat-eaters, and took a fair allowance of alcohol.

I noticed in natives that an increase in the excretion of urea took place in about twelve hours, it may have been earlier, after the addition of nitrogenous food to their meal. This would seem to indicate that the formation of urea, from the disintegration of nitrogenous matters, takes place in the intestines.

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A CASE OF CHYLOUS URINE,

REPORTED BY

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No. 2796 Prisoner, PANDOO, Gond, *æt.* 30, married, a carpenter from Chanda, C. P., was admitted to the Nagpore Prison, April 1st, 1885, sentenced to seven years' rigorous imprisonment for a murderous assault.

Chanda is four days' distant from Nagpore to the south, or three days' march and part of a day by railway. The weather was hot and sultry, but Pandoo did not seem to have suffered from the journey, his weight being 113 lbs., and his health good. But the day after his arrival, he came to hospital in great alarm to say that his urine had turned to milk, and its appearance was very like it.

There were no other symptoms whatever, and the urine was of the following description:—

Acidity normal, sp. gr. 1017, colour opaque, white, somewhat dirty-looking, odour natural. The specimen kept for my inspection had been passed by the patient into a clean wide-mouthed bottle about half an hour before my arrival at the hospital, and it had already become feebly coagulated throughout its mass, shaking like a jelly when gently agitated, and breaking down when more roughly handled. Urates, phosphates and carbonates were present in normal amount, but no sugar.

On boiling, nearly three-fourths of the contents of the test-tube became solid, and, besides albumen, there was some fat present.

Under the microscope no filaria, no casts were found, no blood corpuscles, and very few epithelium cells.

There were numerous minute granular corpuscles, which seemed to be chyle corpuscles, as they were exactly like those in the molecular base of the chyle.

Treatment.—Pandoo disliked milk, so he was allowed whatever diet he preferred, and he took 16 oz. bread, 12 oz. rice, 1 oz. sugar, $\frac{1}{2}$ lb. mutton, $\frac{1}{2}$ pint ditto soup, 1 oz. oil, used in cooking