fever. In investigating this question, I could detect no other cause than the polluted air which these men must have breathed in the confined fore-castle. That there is nothing connected with a sailor's mode of life to expose him to typhus, is proved by the experience of well managed vessels; and, as one among the many proofs which might be adduced, I may mention, that Mr. Clark, who made ten voyages to India as surgeon in Messrs. Green's fine vessels, never had a single case of typhus.

To those who are practically acquainted with the poorer parts of populous towns, it would be needless to point out that the common lodging-houses, and especially those occupied by the Irish, inflict an almost incredible amount of evil on the community: they are the common foci of all epidemic diseases; they frequently are the means of introducing small-pox into the locality where they are situated; and they are a never-failing source of expenditure to the parochial authorities. Although other sources of sickness may prevail, filth, neglect, and destitution—this last, however, by no means so often as supposed—the one prevailing evil and special characteristic is enormous overcrowding, carried to an extent which those unacquainted with the subject can scarcely, even in idea, realize. In the valuable recent report of Captain Hay, the Commissioner of Police appointed to superintend the carrying out of the Common Lodging-House Act in the metropolis, and to whom so much credit is due for carrying into operation a difficult and novel measure, some remarkable illustrations are given. In one eight-roomed house, one hundred and three persons, the population of a hamlet, were herded together; in one room, 14 feet 6 inches square, thirty-seven people were found lying huddled together on the floor. In many of these instances, the space for each inmate could not have been more than forty cubic feet; whilst the lowest amount required for health in a sleeping room is 500 cubic feet, or twelve times the amount.

My own experience corroborates these statements of Capt. Hay. On entering some of these deplorable places, I have found every possible space occupied by men, women, and children; and an atmosphere so fetid as to be almost overpowering to a stranger; causing, indeed, in some instances, nausea and actual vomiting.

That persons habitually breathing an air thus polluted by poisonous exhalations, should become the victims of zymotic disease, can excite no surprise. As to low fever, the amount is enormous. I had occasion, two years since, to examine some of the courts in Gray's Inn Lane; and in one of them was an Irish lodging-house, in which alone twenty cases of fever had occurred in two months.* Another and more marked instance was lately mentioned to me at Leeds, in which seventeen cases of typhoid fever were, about two years since, received in one week at the House of Recovery, from two of these lodging houses; the cost to the parish for this week's work being £50.

It is satisfactory to learn that the Act of Parliament for regulating common lodging houses, for which the community is indebted to the Earl of Shaftesbury, has been extensively put into operation in London and the provinces, with the best results, both moral and physical. At Portsmouth, where there are not fewer than five hundred of these dwellings, I was informed by Dr. Slight, the Inspector, and by Mr. Piercy, the medical officer of the district, that in those houses placed under regulation, there had been a general reduction of disease, especially of fever; and it was particularly stated, that no second case of fever had occurred; whereas, in ordinary circumstances, as shown above, where typhus once breaks out, the rule is that it spreads among the inmates, many of whom often fall victims to the pestilence.

[To be continued.]

MORTIFICATION EXTENDING FROM THE HEAD OF THE FIBULA TO THE CREST OF THE ILIUM. RECOVERY.

By RICHARD ALFORD, M.R.C.S.

CASE. On the 16th of June, 1852, W. B., a carpenter, aged 61, knelt accidentally on a nail when about to clinch the nails of a door. The puncture was three-fourths of an inch deep, just below the right patella; but gave him very little inconvenience at the time. He continued his work until the 19th; and on this evening walked eleven miles. His wife now fomented and poulticed the knee, which had become inflamed and painful; and on the 21st, medical advice was procured and leeches, etc., applied.

I first saw him on June 25th, and found an abscess over the ligamentum patellæ; and, on lancing it, about half a teacupful of tolerably healthy pus escaped. Outside the knee and thigh gangrene had commenced, and extended upwards to about the length of the hand; and the outside of the thigh was red and swelled up to the hip: the inside of the thigh and the leg below the knee were not affected. My patient's general appearance was by no means good; his powers seemed sinking, and altogether the case was unpromising. I ordered him to have as much port wine as he could take, with light nourishment, beef-tea, eggs, etc.; and a mixture of quina, opium, and dilute sulphuric acid, with an occasional alterative aperient pill. A lotion of chlorinated soda was applied to the gangrenous part, and covered with linseed meal and barm poultice. A poultice was also applied over the abscess; and six leeches to the upper and outside of the thigh. For the next day, a cooling lotion of acetate of lead to this part was prescribed.

July 1st. The mortification was creeping up the thigh, and redness was extending across the loins. The case appeared hopeless; the patient was extremely prostrated, and took a bottle of wine daily, but very little else.

July 12th. To my great surprise, my patient kept up, and threw off the dead parts. Sphacelus had extended to the crest of the ilium; a spot of the size of a crown piece had turned black opposite the sacrum, and redness and swelling extended up to the false ribs. He had a pint of port wine and a quart of porter daily, and continued his mixture.

July 16th. I procured a horse-shoe water cushion* for him, from which he experienced great comfort. The ulcer outside the thigh extended from the head of the fibula to rather beyond the crest of the ilium, and was two feet long and eight inches wide at the top, its widest point, the average width being about six inches. Mortification had penetrated deeply in the fleshy part of the thigh at some points.

Aug. 6th. The poultice was omitted, and the lotion of chlorinated soda was continued, and covered with gutta percha sheeting. The dead parts had all come away; the back was sound, and the general health vastly improved. The abscess over the ligamentum patellæ still discharged, and another had formed and burst over the upper end of the fibula, a little below the ulcer. The leg was somewhat swollen, but the inside of the thigh was quite healthy.

Aug. 17th. Water dressing had been used a few days; the granulations were flabby, large, and disposed to bleed; the discharge was very profuse. Lotion of sulphate of zinc was now used, at first weak, but gradually increased in strength, and nitrate of silver was occasionally applied to the edges of the ulcer. From this time the healing process rapidly went on, and his general health improved.

Sept. 4th. The stimulants had been gradually decreased, and were now altogether omitted. A mild saline was ordered to be taken occasionally to relieve head symptoms, resulting doubtless from the decrease of the discharge, and consequent overflow of blood.

* Report on the present state of certain parts of the Metropolis, and on the Model Lodging-Houses of London. By H. D. Grainger, Esq. Ordered to be printed by the House of Commons, 1851.

* No. 6 of Mr. Hooper's cushions.

Sept. 25th. On first getting down stairs, he suffered a good deal from swelling of both legs.

Nov. 19th. The ulcer was now reduced to a mere line a few inches long, and half-an-inch wide. He complained of rheumatic pains in his right shoulder from exposure to a draught; and of cough, in common with the other members of his family. The knee-joint admitted of very slight motion. The abscesses were healed. The legs were now swelled very slightly. He was ordered to take compound squill pill three times a day.

Dec. 28th. The sore was quite healed: he still suffered from rheumatism, etc., but was gaining flesh. The motion at the knee was improving, but he could not yet bend it to a right angle with the thigh. The cicatrix seemed healthy, but he occasionally felt a shooting pain in its upper part at the bend of the thigh, where it seemed a little chafed by his flannel, and a truss which he wore for a left inguinal hernia. This part was now covered with cotton wadding, and the whole daily washed with rain water, and slightly anointed with fresh lard.

REMARKS. Amputation was out of the question, from the extent of the inflammation on my first visit. I had therefore to trust to stimulants, and I consider that my patient owed his life to the port wine, on which he almost entirely lived for the first ten days or fortnight of my attendance on him.

He assures me that the nail penetrated fully three-quarters of an inch; and it must have entered the joint; yet the probability is, that if he had rested for a few days at first he would have felt nothing more of it.

There is some thickening and tenderness around the punctured spot; but the patella is freely moveable, and the difficulty of bending the joint lessens; it moves freely up to about an obtuse angle with the thigh. He walked to church, Jan. 31st, with one crutch and a stick, and found from the fit of his breeches, put on for the first time on that day, that the knee was larger than the other. There is no thickening above the patella. The length of the cicatrix is one foot seven inches; its greatest width at the bend of the thigh is four inches, average width about three inches, in some parts scarcely two. It has receded from the crest of the ilium three inches; the ulcer extended rather beyond this point.

Tewkesbury, Gloucestershire, February 1853.

SUGAR IN URINE NOT ALWAYS INDICATIVE OF DIABETES.

By HENRY JOHNSON, M.D., Physician to the Salop Infirmary.

ALTHOUGH a saccharine state of the urine be the pathognomonic sign of diabetes, we are not too hastily to conclude that this very serious disease exists, whenever we find sugar in the urine.

CASE I. A clergyman, aged 60, had common catarrh, for which he took proper remedies, and, on his return from Aberystwith, came to consult me.

In the course of conversation with him, I found that he was in the daily habit of taking at his breakfast large quantities of *sweet-meats*, or preserved fruits, for the purpose of keeping his bowels regular. He also complained of frequent calls to make water, and it was this circumstance alone that induced me to get an opportunity of testing the urine. It was pale, and of the specific gravity of 1040. Treated with liquor potassæ, according to Moore's test, it yielded a deep reddish brown colour, and it fermented freely with yeast.

Here, therefore, there was the characteristic symptom of diabetes, "*saccharine urine*," but, no rational sign of the disease, except frequent calls to pass water. It was *temporary or occasional diabetes*, and, I believe, easily removed by avoiding in future the abuse of sweets. The patient passed from under my own immediate observation, and I had not another opportunity of testing his urine. But I have

reason to believe that it was so examined, and found to be no longer saccharine. He died about a year after, of disease unconnected with diabetes.

CASE II. Mr. A. B., aged 58, a very tall, portly man, of bilious temperament, ample abdomen, and accustomed to very generous living, sent to me on account of a very severe pain in the hypochondriac and epigastric regions, to which he was very subject. There was no febrile excitement, but he had loss of appetite, a furred tongue, and constipated bowels. As he had formerly, (as I was told) passed a gall-stone, it was suspected that he might be again suffering from this cause, but no such concretion made its appearance. I considered it a case of severe flatulent colic. He had certainly not a single symptom of diabetes; however, to my great surprise, on examining the urine, I found it pale, of high specific gravity (1048), and it contained sugar, as evinced by Moore's test, and that of fermentation with yeast.

The colicky pains soon yielded to appropriate treatment, and the patient required no particular regimen on account of the state of the urine.

It is now two years since the above case occurred. The gentleman alluded to is now performing the active duties of life, and is apparently well. But I have lately obtained an opportunity of again testing his urine, and found it still saccharine.

I consider such cases as the foregoing very valuable, as teaching us caution in our diagnosis and prognosis; for without such proofs that a saccharine state of the urine may be temporary, or normal, we might form a more unfavourable opinion than the circumstances justified.

From what I have observed in another case, I suspect that in feeble states of the digestive power of the stomach, cane sugar is converted into grape or diabetic sugar, and that this, if not further changed in the animal economy, passes into the blood, and is voided by the kidneys, even in apparent health.

The preceding observations were written some time since. I have this day been reading with much pleasure M. Dechambre's paper, "*On the Habitual Presence of Sugar in the Urine of Old People*."*

We have here, therefore, two independent series of facts, M. Dechambre's experiments, and my cases, materially illustrating and confirming each other. The former make us acquainted with a curious physiological law, the latter teach a useful practical lesson. M. Dechambre thinks that the presence of sugar in the urine of old people, arises from the impeded action of the lungs, incident to old age, according to the theory of M. Alvaro Reynoso. The subjects of my cases were not "old persons"; but, perhaps, the function of the lungs in them might be relatively less active than natural from want of active exercise.

Some very curious experiments have been performed by Dr. Claude Bernard upon the sources of sugar in the animal economy. He concludes—1. That sugar is a normal ingredient in the blood and liver of animals. 2. That the formation of sugar takes place in the liver, independent of the ingestion of saccharine or feculent food.†

I have repeated some of Dr. Bernard's experiments. He obtained sugar from the liver and blood of dogs and rabbits. I have found it in the liver, blood, and urine of sheep, slaughtered for the market; hence it appears that the urine of sheep, like that of M. Dechambre's "old people", normally contains sugar; and that in fact sheep are naturally diabetic!

Although sugar was detected by Mr. McGregor in the healthy stomach,‡ I am not aware that it has been discovered in the healthy human liver; and in the only instance in which I have had an opportunity of trying the experiment, I failed to find it.

Shrewsbury, February 13th, 1853.

* Gazette Médicale, April 8, 1852.

† Arch. Génér. de Méd., Nov. 1848.

‡ Medical Gazette, 1837.