yellowish fluid, but its coats were in all respects free from disease. Nothing abnormal could be detected in the large and small intestines; the spleen and the liver were of the natural size. When the liver was being removed, I found that the right kidney was dragged out with it; the fact being that an adhesion had taken place between the contiguous peritoneal layers of the posterior lobe of the liver and of the suprarenal capsule. This circumstance may adequately account for the constant pain in the right hypochondriac region during life; and the sense of weight also complained of was evidently caused by the entire mass unduly stretching the ligaments by which the liver is attached to the diaphragm. A slow process of adhesive inflammatory action had probably been going on for some time: the connection between the two organs was of the most intimate kind, and the knife was required to separate them. The right suprarenal capsule was very large: the left scarcely exceeded the normal size, and was unadherent to adjacent viscera. Purulent matter exuded from both glands when a section was made through them: and a number of little miliary bodies was visible to the naked eye. My friend, Dr. Martyn, of Bristol, has been kind enough to make a careful examination of the diseased organs. His report is as follows:—"*Left suprarenal capsule.* Preservation good, colour reddish-yellow, surface uneven: weight 75 grains. Tears readily, showing rough yellowish-white surfaces, covered with creamy fluid. Consists of a thickened tunic, within which are fibrous septa, forming meshes in which cheesy masses lie loosely surrounded by creamy fluid. *Microscopic appearance.* (*a*) Irregularly roundish nuclear corpuscles, containing fatty granules (often to half the entire cell-contents). (*b*) Parent-cells containing (*a*). (*c*) Proteine granules. (*d*) Large free granules of fat. (*e*) Fusiform cells, also containing fat. These are derived from the septa. The right suprarenal body exhibited a similar condition. *Kidney* pale. From the appearances above-mentioned, and from the action of glycerine, acetic acid, and ether, I conclude that the specimen is one of yellow tubercle in an advanced stage of degenerative softening."

The specimen has been deposited in the museum attached to the Bristol Medical School.

Remarks. On looking through a valuable series of cases in the *Medical Times and Gazette*, illustrative of disease of the suprarenal capsules, I find that there are three symptoms more commonly present than any others. These are debility, bronzed skin, and emaciation. I have enumerated them in the order of frequency. The *debility* appears to exist always. It indicates the development of a special dyscrasia, characterised by a grave error in the blood-forming process, and consequent prostration of the vital powers. The dyscrasia is one which probably has some affinity with idiopathic anæmia, with chlorosis, or with that constitutional state which precedes the local deposit of tubercle. It is impossible in all cases to define its cause: but it is certain that some mental derangement or shock has had a great deal to do with many of the cases of this disease which have been published. Solidists and humoralists may here find a capital debating ground: for the inquiry is naturally suggested, is the disease of the blood the cause of the neurosis, or the neurosis the cause of the blood-disease?

Next let me advert to the *bronzed skin.* I find two apparently authentic cases on record in which bronzing of the skin was unaccompanied by any noticeable changes in the suprarenal capsules. But these are only two cases out of a considerable number in which the disease of the glands has been successfully diagnosed during life from the cutaneous discoloration. Partial disease of the capsules has been detected in several instances without any corresponding bronzing; but I believe that not a single case has been published in which total destruction of the capsules has existed, without manifest discoloration of the integuments also. Hence, as the *British and Foreign Reviewer* remarks, the cutaneous bronzing may be dependent upon the capsular affection, but the converse of this proposition cannot for a moment be entertained. But while I agree with the Reviewer in thinking that the condition of the integument is almost absolutely diagnostic of disease of the capsules, I think he too hastily concludes that the latter is the *cause* of the former. We must know a great deal more than we do now about the physiology of the ductless glands, before we venture to pronounce so decisively on the phenomena of their pathology.

Emaciation is a symptom not so frequently observed, and in many cases has been entirely absent. It is easily explained, whenever it exists, by the depraved condition of the blood, and by the altered nerve-tone resulting therefrom. Nutrition must be gravely interfered with by such primary elements of disease.

The case which I have related affords a marked illustration of the three great symptoms. The debility and emaciation existed in an extreme degree; but the bronzing was strictly limited to those portions of the skin habitually exposed to the light, and therefore looked like an aggravated form of sunburntness.

Dr. Addison's opinion as to the hopelessness of the prognosis appears to be confirmed by every fresh case which is published. The treatment is unsatisfactory in every sense of the word: nerve-tonics and blood-tonics are equally useless; and perhaps we shall have to await the discovery of a new specific before being able to announce our ability to control the progress of this singular disease.

An account of the structural anatomy of the suprarenal capsules, by Kölliker, is to be found in the *Medical Times and Gazette*, vol. ii, for 1855. M. Brown-Séquard's investigations in their physiology show that these bodies have a very important part to play in the animal economy—a part which, if omitted, must lead to fatal results. (*Arch. Générales de Med.*, Oct. and Nov. 1856, quoted in Ranking's *Abstract*, Jan. 1857.) The substance of M. B.-Séquard's observations is, that (*a*) the capsules are very sensitive. (*b*) As age advances, the capsules are found to gain considerably both in weight and in volume; and hence it appears that these organs are not exclusively related to embryonic life. (*c*) Extirpation of both capsules destroys life with as much certainty, and with greater rapidity than extirpation of the kidneys. The extirpation of a single organ was invariably fatal. After removal of both capsules, the following phenomena were noticed: feebleness, gradually passing to extreme prostration; a respiration first quickened, then retarded, and lastly irregular and spasmodic; a quick and weakened pulse; gradual diminution of animal heat; and lastly, vertigo, convulsions in various forms, and occasionally coma. It would thus appear that the suprarenal capsules are essential to life, and that their removal or disorganisation may lead partly to some injurious alteration in the blood, and partly to some injurious operation on the nervous system.

CASE OF WOUND OF KIDNEY: RECOVERY.

By J. Johnston, M.B.Lond.

[*Read before the Birmingham and Midland Counties Branch, February 12th, 1857.*]

On December 24th, 1855, at 10 P.M., I was hastily summoned to attend William Hyde, aged 32, who had been stabbed in a quarrel. When I arrived at the public house at which he lay, I found him in a state of collapse from the great loss of blood; the pulse hardly perceptible; vomiting was continuous, with hiccup. He complained of severe but spasmodic pain in the groin, where, he said, he had been stabbed with a carving knife. I therefore examined the groin: there was no wound, but a spasmodic retraction of the testicle. Having turned him on to his side, I found an incised wound, one inch and a half in length, on the right side of the spinal column, and about two and a half inches above the posterior crest of the ilium. Considerable hæmorrhage was still taking place, and he said that the knife had broken in his back. Having sent the policeman to find the broken knife, during his absence I assiduously applied cold water to the lumbar region, and gave the patient some brandy and cold water, with forty drops of tincture of opium. The policeman not being able to recover the knife, I thought it advisable to pass my finger into the wound, to probe for any broken piece. My finger passed upwards and inwards, touching the transverse process of the third lumbar vertebra, and about an inch above this entered the peritoneal cavity. The knife was afterwards found, unbroken, but bent about three-fourths of an inch from the point: it was eight and a half inches in length, and had been driven in up to the haft. I continued the cold application. A magistrate having arrived, the patient's deposition was taken, as I did not think that he could rally. Warmth was applied to the feet. Gallic acid in five-grain doses, with a fourth of a grain of opium, were given every twenty minutes, for three doses, and afterwards repeated every hour, with occasional doses of cold brandy and water. He chiefly complained of retraction and pain in the testicle; this was relieved by an embrocation of olive oil and tincture of opium in equal parts. About half an hour after my arrival, he expressed a desire to pass his urine, and then passed by the

urethra about a pint of blood. This was repeated three or four times during the night, my assistant remaining with him.

December 25th. He had slightly rallied. The treatment was continued.

December 26th. Hiccup continued; this was relieved by bits of ice. He still complained of pain in the groin. Gallic acid, with hydrargyrum cum cretâ, were given three times a day.

December 27th. He continues very much the same. I ordered beef-tea and brandy to be continued. The urine was albuminous.

December 28th. The bowels not having been opened, I ordered half an ounce of castor oil, and this to be repeated in three hours. As he complained of a general pain all over the abdomen, and tympanitis, a linseed poultice was applied, and increased doses of the hydrargyrum cum cretâ with opium. The gallic acid was omitted. Ice was continually given; this relieved the hiccup and vomiting, which had reappeared. By these means, the pain over the abdomen was relieved; and, without any other severe symptoms, the wound gradually healed; and, on the 14th of January, he was able to be removed to his own home—a distance of nearly half a mile. I still continued to visit and watch the case daily.

January 21st. I perceived, for the first time, a slight fulness over the wounded part, at about the situation of the internal opening of the wound; this gradually enlarged, without much pain. I thought that, in all probability, it was a collection of pus, the deep parts not having united so soon as the external parts. No pain was complained of, only the fulness; and, as Nature had done so much for my patient, I thought that I would leave the abscess to her care also, unless urgent symptoms should arise.

January 25th. On examining his urine under the microscope, pus-globules were found, with exudation cells. I therefore thought that it would be advisable to open the abscess, for fear of mischief by pressure upon the kidney.

January 26th. I made a valvular opening into the tumour, which had now reached the size of a small child's head. About a pint of urine immediately escaped, loaded with phosphate and a little pus. I carefully closed the opening, before the tumour was quite empty, with a compress and bandage; and, as he was very faint, and vomiting came on, I gave him an opiate, with a full dose of castor oil.

January 27th. I again opened the valve, and allowed a quantity of clear urine to escape; and, as there was great tenderness over the whole of the abdomen, I diminished his food, gave small doses of calomel and opium, and applied linseed poultices over the bowels. By these means, the thirst and sickness were relieved; and, on the next morning (Jan. 28th), I allowed the sac to empty itself thoroughly; its contents, as before, being clear urine, of strong smell, and with a little pus settling to the bottom of the cup. The external opening very soon healed, and I had to reopen it and pass a small female catheter up a passage extending upwards and inwards for about three inches, where there seemed to be a small sac. This I repeated night and morning for nine or ten days, when, as the secretions had gradually diminished, I merely applied a bandage with small pledgets of lint. The man has had no relapse since then. He enjoys life, and can eat and drink heartily of ale and spirits, without any unpleasant after consequences in the kidney. He has decidedly grown much fatter since the accident than ever he was prior to it.

LIQUOR SODÆ CHLORINATÆ AS A LOCAL APPLICATION IN SMALL-POX.

By JOHN GABB, Esq., Bewdley.

I HAVE found a weak solution of the liquor sodæ chlorinatæ so beneficial in the affection of the mouth and throat, in cases of small pox, that its efficiency cannot be too widely known. It may have been used by others; but, if so, I have not seen any account of it. In each case in which I have employed it, the effect has been extraordinary: one washing of the mouth and gargling of the throat has restored the patient to comfort, and ability to speak or swallow without difficulty. The strength I have used has been a drachm to half a pint of water. Applied to the skin, it has had the effect of allaying the troublesome itching; and I think it not unlikely that a much stronger solution, applied in the earlier stage of the eruption, might be as efficient in preventing pitting as some other remedies which have been recommended, whilst at the same time it could be more easily used.

Finding the solution so useful in allaying the itching of small-pox, I gave an old woman, aged 86, who had been for more than twelve months tormented with pruritus, and had tried various remedies without effect, the same to use as a lotion. In a few days she came for more, and said she had never used anything that gave her so much relief.

Gulstonian Lectures:

ON

DIABETES AND SACCHARINE CONDITIONS OF THE URINE.

DELIVERED AT THE ROYAL COLLEGE OF PHYSICIANS, FEBRUARY 25TH, 27TH, AND MARCH 4TH, 1857.

By ALFRED B. GARROD, M.D., Fellow of the Royal College of Physicians; Professor of Materia Medica, Therapeutics, and Clinical Medicine, at University College; and Physician to the Hospital.

LECTURE I.

MR. PRESIDENT AND GENTLEMEN,—Honoured by being selected by the College to deliver the Gulstonian Lectures of the present year, I was at first a little perplexed to find a subject with which I could presume to occupy the time of such an audience, or upon which I could hope to throw any additional light. On further consideration, however, finding that I had met with many cases of disease accompanied by saccharine urine, some presenting all the phenomena which attend true diabetes, others exhibiting symptoms but little marked, and such as might be readily overlooked, it occurred to me that I might possibly be able in these lectures to lay before you, in a small compass, the present state of our knowledge on this important subject, and endeavour to show what advances have been made of late in our progress towards unraveling the mystery which has so long enveloped this most obscure affection. It might naturally have been expected that the discoveries of modern science, and especially the rapid strides of organic chemistry, would ere this have been enabled to solve at least some of the difficulties. Chemistry has indeed shown the *nature* of the morbid product in this disease, its properties, composition, and the changes it undergoes; how it may be imitated, and so forth; but we have signally failed, by the aid of this science, in obtaining a clue to the real nature of the alterations which constitute the essence of this disease.

Although I fear we shall have to confess that our knowledge is still very imperfect, yet at the same time there are, I think, grounds for encouragement; for, if we do not know at present what diabetes really *is*, we have of late been able to affirm more confidently what it is *not;* and this alone indicates considerable progress. Besides this, recent investigations upon the so called glycogenesis, or sugar-forming function in the animal economy, appear to throw glimpses of light which may probably one day remove much of the obscurity which has hitherto prevailed. In the present lectures, it is my intention to limit the term diabetes to that form of disease in which the secretion of urine is not only excessive in quantity, but in which also its quality is altered from the presence of sugar—a principle which is absent in the healthy secretion. Other forms of disease, in which the urine is excessive, but where no saccharine matter exists, I should be disposed to follow the custom of many high authorities, and class under the head of excessive diuresis. Some difficulties, however, have occasionally arisen from the confusing together of many very different diseases under the general head of diabetes.

Saccharine diabetes has received many synonyms; sometimes it is called diabetes mellitus, to distinguish it from simple excessive diuresis, often named diabetes insipidus; it has been called also paruria mellita and melituria; and recently, on account of the supposed identity of diabetic sugar and glucose or starch sugar, it has been named by French physicians glucosuria—a term now often employed in this country.

The ancients were totally unacquainted with the morbid condition of the urine which is pathognomonic of this disease, and hence grouped together indifferently all affections in which a great flow of urine was the prominent symptom. It was only in 1684 that Willis first called attention to the curious and im-