sarily be opaque) to be taken out, and the iris incised close to the pupil. These steps were effected with a lancet-shaped irisknife. The external lip of the wound in the iris was drawn out, and a portion cut off with a pair of scissors. There was no lens, absorption of this body having taken place. The opaque capsule was most readily removed with a pair of small forceps, the adhesion to the iris proving to be but delicate. The artificial aperture was not, as might be supposed, too large; on the contrary, it was rather under size; but it was advantageously placed, being behind the most transparent part of the cornea, and sufficed to afford useful sight. When the iris has undergone structural change, it is difficult to make an aperture of sufficient magnitude; and there is a tendency in the new hole to get less.

This is just the kind of case that used, but a few years ago, to be considered irremediable. Tyrrell's operation of drilling was introduced to overcome the difficulties, and it is a method possessing merit; but where the pupil is very much contracted, as in this example, the clearing of it as far as possible might not, after all, make a sufficient entrance for the light. Again, when there is central opacity of the cornea, it is inapplicable. We see here, then, a marked instance of what we will venture to designate as progressive ophthalmic surgery.

II. EXTRACTION OF OPAQUE CAPSULE AFTER THE OPERATION FOR CATARACT.

Under the care of HAYNES WALTON, Esq.

A youth, who had undergone operations for cataract, had one of the pupils obscured by opaque capsule, which was disposed in a manner difficult to be got rid of according to the general rule of practice. It lay as a continuous membrane over the vitreous humour. Very often it is impossible to depress capsule so circumstanced, as it will rise as often as pushed down. Moreover, it will spring back to the former site even when a considerable portion of the circumferential attachment has been torn through. Neither was it most favourable for being rent with two needles. The measure most suitable, according to Mr. Walton, and that at the same time the least injurious to the eye, was extraction. The incision in the cornea must always be proportioned to the body to be removed: it must be ample, but not longer than is required. Mr. Walton suspected that the sharp canula forceps might be used, and they were employed with effect. This elegant and scientific little instrument, of French invention, is figured in Mr. Walton's work on the Eye. The blades are brought into play by a canula, which encloses them, shutting when the canula is pushed forwards, and opening when it is withdrawn. The degree of their expansion may be graduated by allowing more or less length of blades for the canula to work over—an alteration which is provided for by the screw at the shoulder of the instrument that secures the stem of the blade. The larger and sharper blade is perforated about the centre, to receive the hooked end of the other; and the surfaces, where the two come in contact, are crosscut, like common forceps. The sharp blade should be sufficiently keen to enter the cornea readily; and the lesser should have its edges so levelled that there shall not be any projecting angles, or any obtuseness to impede penetration. The great advantage of this beautiful appliance is, that it completes by itself all that is required, the aid of any other instrument being dispensed with. If properly used, the aqueous humour may generally be retained till the capsule is withdrawn—a great desideratum. When the capsule is in too large a mass to be extracted after this method, Mr. Walton excises the cornea with an iris-knife, and often employs the blunt canula forceps—more frequently, perhaps, than any other description of forceps.

III. PTOSIS AND LAGOPHTHALMOS (OR PARALYSIS OF THE ORBICULARIS PALPEBRARUM) IN THE SAME INDIVIDUAL.

Under the care of HAYNES WALTON, Esq.

Mr. Walton pointed out that there was a peculiarity in the affection of different nerves on the two sides of the face, and in the paralysis being confined to single muscles. A very dissipated looking man, 50 years old, restless and excitable, presented himself with slight ptosis of the left eye, and slight paralysis of the orbicularis of the other; so that he could not close the eyelids completely, and less effectually when the opposite eye was kept open. There was ptosis alone, the levator palpebræ being solely affected, while the orbital muscles were healthy, and vision was intact. The lagophthalmos, too,

was the only evidence of any facial paralysis on that side. There was not any pain in the course of the nerve, nor at the root of the ear; nor was hearing affected. The circulation was languid, and the appetite defective. The history accorded with the man's appearance. He smoked in excess, and he drank freely, in excuse for which he assigned mental distress. The paralysis in each instance had been slow, having been observed for several days, and was increasing.

It was evident that the most essential part of the treatment was to effect a change in the patient's habits; and proper admonition was given. Sulphuric ether and aromatic spirit of ammonia, in decoction of bark, were prescribed. We watched the case for three weeks. The smoking was considerably reduced; all but the pipe after breakfast—the darling one with all smokers—having been left off; and the potations reduced to malt liquor. Improvement was soon marked. His medicine was changed to iron and quinine. When we last saw him, the ptosis no longer existed. The insufficiency of the orbicularis palpebrarum was yet apparent, but less. He ceased his attendance abruptly—a common termination amongst outpatients, when a surgeon most desires to watch a patient longer.

Original Communications.

ON THE EFFECTS OF SACCHARINE DIET IN DIABETES MELLITUS.

By THOMAS WILLIAMS, M.D.Lond., Physician to the Swansea Infirmary.

THE BRITISH MEDICAL JOURNAL for November 14th contained a paper by my friend Dr. W. Budd, of Bristol, suggesting, at the prompting of Mr. Augustin Prichard, the use of sugar as a remedy in diabetes.

In common with others, I read the letter in question with mingled smiles and astonishment. But knowing, from personal acquaintance, that both Dr. Budd and Mr. Prichard were men of thought and sagacity, and feeling assured, from their known industry and literary habits, that they must be familiar with those researches which in France and in this country have, although recently, brought the pathologist so near to a correct solution, not only of the seat, but of the nature of diabetes, I resolved to put the suggestion into practice.

It has been my lot to have, during the last few months, no fewer than three cases of this disease under my care.

In one, death speedily took place from exhaustion. In defiance of everything that was done, the specific gravity and the quantity of urine continued considerably above the normal standard for the two last months of life; and, although a remarkably powerful, corpulent, and athletic man, the patient rapidly sank. There was no intercurrent complication. He died from pure exhaustion. The loss of flesh was considerable; but the specific gravity of the urine for some time before death varied between 1050 and 1060, and the quantity between six and eight quarts in the twenty-four hours.

In the other two cases the conditions are much less active. Both patients are still alive, and are gentlemen, of the ages respectively of 34 and 38. Both are thin, hard, wiry-looking persons; in both the disease has endured for a period of nearly two years. In neither has any loss of flesh or weight occurred during the last six months. Both are also similar in this respect—that the urine for many months has preserved an extraordinary uniformity in volume and specific weight. Both bear testimony to the fact that unusual muscular exertion of any kind, if it does not increase the quantity, is sure to augment the specific gravity of the urine to a degree corresponding to the severity and duration of the labour. This observation is one not devoid of interest. From it, it may be argued that whatever increases a general tissue change throughout the body, will add to the solids of the urine. Such a method of reasoning is, however, vague and liable to many fallacies. A better explanation may be arrived at.

The opportunity afforded by these two cases induced me to make trial of the plan of treatment suggested by Dr. Budd. The opportunity was as highly favourable. The symptoms were quiescent and stationary. The patients were intel-

lectual men. Each was eager to discover a new remedy for a disease with which he was profoundly disgusted. Each received the proposition, which emanated from the genius of my Bristol friends, with a perfect transport of joy. "What!" they exclaimed: "To give us sugar and saccharine food, the forbidden fruit of so many months—that which science has so long and so peremptorily interdicted! By Jove! there can be no method in the madness of medical men! To-day they are allopathic; to-morrow enthusiastically homœopathic! But we will submit to the proposed experiment."

It should be stated that between these two gentlemen there was no concert. They were unknown to one another, and lived in distant parts of the country.

I proposed that each should first return to common mixed food—including the use of sugar at breakfast and tea, ordinary bread at every meal, vegetables, and malt liquor.

It should, of course, be understood that before this experiment both these gentlemen had rigorously adhered to a non-saccharine dietary; that in Case A the urine had scarcely ever, for six months previously, varied from 1040 in specific gravity, and three pints in quantity in the twenty-four hours; that in Case B the conditions were very nearly the same, although not quite so unfluctuating.

In twenty-four hours after the change of diet in Case A, the urine increased from three pints to four pints and a half, and from 1040 in specific gravity to 1042. In forty-eight hours under the same diet the quantity rose to five pints and some ounces, and the specific gravity to 1050. In another twenty-four hours, being the third day from the commencement of the experiment, the volume rose to six pints, and the specific gravity to 1056.

Case B exhibited almost precisely the same change. The urine increased in quantity and density in the same time in an equally remarkable degree.

Neither of the patients could be prevailed upon to continue the experiments any longer. Both grew rapidly worse in every respect, and became greatly alarmed. The thirst grew more and more unquenchable. The skin became drier and drier; the bowels were every day more constipated; the mind passed from a calm state into a condition of rapidly increasing excitement, in one bordering almost on mania. The symptoms in every sense exchanged the passive for the active condition. Both patients regained their former tranquil feelings by the use of opium for three or four nights; and it was only slowly that the urine returned to its former physical properties. These two gentlemen emerged from this ordeal with the deeply-rooted convictions that the old system was the best; that practice is above and beyond theory; that the rule of contraries is preferable to that resting its airy claims on fancied similitudes.

I do not wish either to disparage or to discourage my friend Dr. Budd. His meteoric idea, although not new, came upon me with convulsive and startling effect. I have found that his theoretic prophecies have alarmed me in actual practice. In his own able hands the results may be different. Let him give them to the world!

It seems to me that the results obtained through the preceding experiments lend a striking confirmation to the views lately advocated by Dr. Harley, of University College. (*British and Foreign Medico-Chirurgical Review*, July, 1857.) Dr. Harley proves, by an ingeniously devised series of experiments, that certain irritating substances (chloroform, ether, methylated spirit, ammonia, etc.) injected into the portal system of a healthy animal, are capable of exciting that irritation of the liver, which, in a very short time, is followed by the appearance of sugar in the urine.

This is undoubtedly the fact. Dr. Harley differs from M. Cl. Bernard as to the explanation. I have no hesitation in siding with Dr. Harley, and maintaining that irritating substances introduced into the portal system augment the glucogenic function of the liver, by stimulating the hepatic branches of the pneumogastric nerve, by which the stimulus is transmitted to the spinal centre, and thence reflected through the splanchnic system upon the secreting cell-system of the liver; and that, by parity of reasoning, the sugar, in my human experiments, entering either in an entirely unchanged, or in a partially unchanged form, into the portal system, acted in the same manner as an *irritant* upon the hepatic branches of the pneumogastric nerves.

CASES OF NERVE-DISORDER, RECORDED WITH REFERENCE TO THE PROBABLE OPERATION OF MALARIA AS A CAUSE.

By C. HANDFIELD JONES, M.B., F.R.S., Physician to St. Mary's Hospital.

SERIES II (*concluded*.)

CASE XXIII. L. M., aged 16, a plasterer's labourer, was admitted May 25th, 1857. He never had ague, and has lived all his life in Marylebone. He has been ill six weeks. He was "red in the face and fat" when he was first taken ill, but is now extremely anæmic. The skin is warm; the pulse weak; the bowels regular; the tongue coated. At the beginning of his illness he had cold shivers, and has the same now from 2 to 4 A.M. every day; he gets hot then for two or three hours, and afterwards has sweating. There is no enlargement of the spleen or liver. He was ordered to take two grains of disulphate of quinine every two hours.

May 28th. He has not had the shivers nor been feverish the last two nights; he feels only weak. The quinine has produced buzzing in the ears. The skin is cool; the tongue white.

R. Quinæ disulphat. gr. ij; ferri sulphatis gr. iv; acid. sulph. dil. q. s.; aquæ ʒi. M. Fiat haustus quater die sumendus.

He was ordered to take a drachm of cod-liver oil three times a day.

June 30th. He looks and is better, but is still very far from strong, and has traces of febrile paroxysms still hanging about him. The medicine was not continued more than about a week since last visit.

This case of quotidian fever seems to have been of purely London origin.

CASE XXIV. G. R., aged 32, a carpenter, generally has good health. He has been ill three weeks. He was taken ill at Dover, with shivering occurring every night, followed by violent sweating; he had pains in knees and soles of feet. He still shivers every night, more or less; but has no sweating. He complains of debility, pain at the back of the head, and exhaustion on the least exertion; has bad nights, and no appetite. The pulse is very feeble; the tongue is covered with white capped papillæ; the skin is cool; bowels costive; urine of dark colour. He has pain across the loins, and in the left shoulder. The stomach and intestines are shrunken; there is no enlargement of the spleen or liver. The thoracic organs are healthy. Iodide of potassium, with carbonate of ammonia and tincture of cinchona, were given at first for three days, with two doses of calomel and colocynth, but without any advantage.

July 22nd. The stomach can only retain milk and beef-tea. He is so feeble he can hardly stand. The bowels are confined. There is no epigastric tenderness. He was ordered to take three grains of disulphate of quinine three times a day.

July 25th. There is no sickness; but he takes only milk and arrow-root. The tongue is less coated; pulse very weak. He is extremely weak. The urine is exceedingly dark coloured. The quinine was ordered to be taken four times a day. He had a chop and half a pint of porter.

July 28th. He feels hungry, and is much better; the tongue is much cleaner; pulse still very small and weak; urine still very dark, specific gravity 1020, not albuminous.

August 5th. He is improving, getting stronger. The urine is much lighter coloured.

August 12th. He was discharged, well.

REMARKS. The above is a good instance of malarious disease, the pyrexial symptoms having receded so as to be only obscurely marked, and little more of evident derangement existing, except profound debility and disorder of the digestive functions. The urine alone retained the febrile character, its deep colour indicating a great amount of waste, especially of the red globules of the blood. Its amount was not measured, but I think I can be sure it was not below the normal. I do not know that Dover is considered a malarious place; but there can be no doubt of the nature of the above case; and a good many instances of ague have come under my notice the last year in persons who appeared to have received the infection in Kent. I believe practitioners would often do well to inquire, in cases of obscure disorder, whether their patient might not have brought infection with him from some seaside or other place he had lately visited.

CASE XXV. G. N., aged 56, a smith, was admitted February 1042