a case the diabetes need not be of an "insulin-resistant" type, and would appear to result primarily from the islet lesions. Nevertheless it is possible that such islet lesions might themselves be secondary to a short period of anterior pituitary hyperactivity.

Summary

Evidence is given of the significance of the anterior portion of the pituitary gland in the control of carbohydrate metabolism in general, and, in particular, in the regulation of insulin sensitivity.

Many of the effects on carbohydrate metabolism of hypophysectomy and of the administration of anterior pituitary extracts are intimately related. They are here discussed under separate headings.

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The Ministry of Health has issued Part I of the Costing Returns for the year ending March 31, 1938, relating to all the principal institutions (other than infectious diseases hospitals) for the treatment of persons in need of medical or surgical care and attention which are administered or utilized by local authorities in England and Wales. These institutions include Poor Law hospitals, general hospitals administered by local authorities, sanatoria and other residential institutions for the treatment of tuberculosis, and maternity homes and hospitals. The object of this publication is to assist local authorities in the economical administration of the institutions under their control by enabling them to make comparisons between the average costs of their own institutions and of the comparable ones belonging to other authorities. The returns may be obtained from the Stationery Office, price 9d.

OCULAR REACTION TO FOREIGN PROTEIN

AN ACCOUNT OF A SLIGHTLY UNUSUAL CASE

BY

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Ocular manifestations of allergy are not very common, or possibly it may be that many such manifestations are not at the time actually recognized as such. This is not remarkable when one considers that the number of proteins which can give rise to allergic symptoms is so great that it is often difficult, or even impossible, to find the particular one responsible in a given case, especially if the patient's contact with it is spasmodic and there is nothing definite in the chronological history. The majority of the allergic conditions which come within the purview of the ophthalmic surgeon are external affections of the eyes—urticaria of the lids, shared with the rest of the skin of the body, the acute conjunctivitis of hay fever, and the conjunctivitis occurring in those sensitive to orris root, etc. The cornea does not appear to be readily affected, although parenchymatous or interstitial keratitis is regarded by many as an allergic phenomenon. So far as I know, it is not generally thought that the deeper structures of the eye ever become seriously involved in ordinary allergic upsets, but they can become affected by acquiring unusual sensitivity towards lens protein and uveal pigment, etc. In the usual cases, therefore, of iritis, iridocyclitis, and so on which one sees in the consulting-room or out-patient department, hypersensitivity to foreign proteins does not readily spring to mind as a possible cause. In most cases one searches for the evasive "septic focus"—unsuccessfully often enough—and then treatment is limited to general principles, often with disappointing results. It is in view of this that I think the following case may perhaps be of some interest.

Case Record

In April, 1937, a young woman attended at the eye out-patient department at the Llandudno Hospital. She complained that the left eye had become slightly inflamed fourteen days previously and a few days later the right eye had followed suit. Vision had become slightly misty. On examination I found that there were some keratitic precipitates (k.p.) on the back of each cornea. The vitreous was hazy and vision was reduced to 6/12 with the right eye and 6/6 partly with the left eye. A diagnosis of double cyclitis was made, and she was placed on atropine and syr. ferri iod. The Wassermann reaction proved negative. She attended for two or three weeks, the only change being a slight increase in the "k.p." On May 7 she was admitted to hospital for investigation. This proved negative except for a very slight reaction to a tuberculin test. With hospital treatment, however, she improved slightly. About the middle of June she relapsed badly—large "mutton-fat k.p." were beginning to form and at the same time there was vascularization of some areas in the deeper layers of the cornea. At this time, hoping that a fresh point of view might be of value, I had her investigated at one of the larger eye hospitals. This investigation again revealed a slight reaction to tuberculin, and a course of injections was suggested and given. There was no improvement in her condition, which continued to be bad until October, 1938.

On October 14 she was, with some very faint hope, put on to prontosil album—four tablets (2 grammes) daily—with the usual warning as to diet. On November 4 she came to the

out-patient department with both eyes open, the congestion practically cleared, and with only little evidence of active cyclitis. She informed me that this remarkable change in her eyes had started about ten to fourteen days previously. I saw her again on the 18th, and by this time one might say that, but for the evidences of past inflammation, the eyes were practically normal externally and the vitreous haze seemed to be clearing well.

Although fully aware of the many curative triumphs of prontosil, I was, in spite of the rather dramatic change, completely puzzled to account for its effect here. It appeared to me that if prontosil had dealt so effectually with whatever septic focus was at the root of the trouble, surely this focus would have been made evident by ordinary clinical signs and symptoms and would have been discovered during the course of the investigations which she had undergone. I cross-examined her about her general condition, and it appeared that she felt much better and thought this was because she had stopped eating eggs. This seemed significant, and I asked her if she had noticed whether anything else to do with fowl had affected her. She said that she liked chicken, but that it disagreed with her. She slept on a feather bed, and her sister volunteered the information that she always complained that she never felt rested on it and would prefer a hair mattress. This, of course, may have been merely a question of physical comfort. It was decided to stop prontosil and all other treatment, and she was advised to continue on an egg-free and chicken-free diet and to change her mattress.

She came to see me again on December 16, and I was extremely disappointed to notice that she seemed to have had a relapse. The photophobia, congestion, and lacrimation were all present again. I asked her when this had occurred, and she gave me this rather remarkable account. It appeared that her eyes were perfectly well until December 13. On that day she was breaking eggs to help to make a Christmas cake. Some of the egg-white got on to the back of her hand. She rubbed it off, but a few minutes later the skin of her hand began to itch and about an hour later the photophobia, lacrimation, and mistiness of vision had returned. These continued severely for about twenty-four hours, but gradually improved, and she said, when I saw her, that she was much better than she had been. All the symptoms cleared up in two or three days, and she continued perfectly well until January 3, 1939, when her sister rubbed a little egg-white on her hand again. She did this at 3 p.m., and by 7 p.m. all the old symptoms had returned. They cleared again by the 6th.

She was readmitted to hospital and her sensitivity to egg-white was verified again. A little egg-white about the size of a sixpence was rubbed into her left arm. The skin became reddened and irritable, the conjunctiva became injected within an hour, and in two hours she could not open her eyes owing to intense photophobia and lacrimation. A course of desensitization was begun before she left hospital, and she is still on it. After each injection she has had an "eye reaction," but these are becoming less severe, and it is possible that she may eventually be completely desensitized to egg protein, etc. Between injections the eyes are perfectly clean and quiet, there is a faint vitreous haze, and the only really obvious traces of her past trouble are the corneal nebulae which followed the vascularization when the cyclitis was at its height. Her vision is now quite good. Actually she has escaped lightly, when one considers that her acute symptoms lasted from April, 1937, to October, 1938—a period of eighteen months.

Since I last saw the patient I have attended another young woman who had a mild iritis in one eye which resisted treatment for many weeks. All investigations proved negative. The eye could be kept fairly quiet on atropine, but flared up acutely when this was stopped. In reply to my question she told me that she was extremely fond of eggs, and I suggested that she should stop them, which she did, with practically the immediate cessation of the iritis, which has not recurred since.

This second case might be purely coincidental, and I just mention it as a matter of interest. There does not,

however, appear to be much doubt in the former case that the egg, chicken, etc., proteins were either the actual cause of her iridocyclitis or that the eyes became sensitized to them during an attack of iridocyclitis and the acute symptoms had been kept up by the consumption of eggs and chicken—which had been rather high in an attempt to "feed her up well."

Whatever may be the true solution in this case, since cyclitis of unknown origin is so often resistant to treatment and so frequently means a gloomy prognosis, I feel that the account of the peculiar circumstances may be of some value as a possible clue to the cause of other cases of uveal inflammation for which no obvious reason can be discovered.

Clinical Memoranda

Suspected Case of Vitamin B₁ Deficiency

The suspected case of vitamin B₁ deficiency recorded below may be compared with one of pink disease which recently came under my care. In the latter the patient, a male child aged 17 months, showed the same objection to being handled, and the pink or, rather, red colour had a similar distribution to the areas of congestion in the present case. The patient with pink disease was also brought to me by the parent on account of "failure to pass water." Improvement was satisfactory under sedative treatment directed at controlling the attacks of peripheral irritation associated with the condition, but for some ten weeks the patient passed water only twice and sometimes only once a day, there being obviously great discomfort each time. Unfortunately I did not try vitamin B therapy.

CASE RECORD

At 9 o'clock one evening I received a call to a female child 5 months old.

History.—On arrival the mother told me that the child had been perfectly well until the evening of the previous day, when she had not taken her 10 p.m. feed. Afterwards she spent a quiet night, but appeared listless in the morning and did not take her feed. During the day she lay very still, seemed to resent being touched or picked up, and the mother noticed that the breathing gradually became more rapid. The child refused all her feeds, but took orange juice and boiled water greedily. She passed two rather loose motions. The child had not been breast-fed owing to inability on the part of the mother. She had been reared on dilutions of a well-known brand of unsweetened condensed milk, with added brown sugar and halibut-liver oil, 2 minims twice daily. A teaspoonful of orange juice had been given in 2 oz. of water twice a day.

Examination.—The child resented being handled. She appeared well nourished but very dehydrated. The extremities of all four limbs were very cold and much congested, the congestion extending from just below the elbow to the finger-tips and from the junction of the lower and middle thirds of the tibia to the tips of the toes. The respiration rate was 48, with good air entry all over both lungs. Temperature 97.6° F.; pulse rate 160. Nothing abnormal was found in the nervous system. I was puzzled to account for the syndrome, advised the mother to keep the child warm and give it only boiled water, and said that I would see it again the following morning. At 10 a.m. the next day the report was that the child had been quiet all night except for the rapid breathing. She had passed neither urine nor faeces, and had taken only very little of the boiled