

is leading her ordinary life. The period of ten days subsequent to rest show a return to the normal condition, the average fall in worth being 5.35 per cent., rather greater than before. The general average of the readings of hæmoglobin and corpuscles fell somewhat during the period after rest, but as the worth remains at about its mean of 1.00 the fall merely implies a temporary increase in the volume of the blood.

A further point of interest lies in the gradual steady increase in the worth that occurred during rest. Regarding the morning observations alone as being the readings taken when the blood is presumably at its steady point, a gradual rise takes place from 0.99 to 1.02, when it attained its maximum and remained there for three days, falling after activity was resumed to its mean of 1.00. Whether this high level would have been maintained through a prolonged period of rest is doubtful.

To summarise briefly the above facts:

1. There is a normal day fall and night rise in the worth of the corpuscle, representing a daily destruction and regeneration of hæmoglobin.
2. Active exercise increases the extent of the day fall and night rise.
3. Active exercise stimulates a slight over-production of hæmoglobin.
4. Passive exercise (massage) diminishes the volume of the blood, but has no effect in diminishing or increasing the amount of hæmoglobin.
5. Rest reduces the extent of the day fall in worth, representing a diminished destruction of hæmoglobin.

The bearing of these facts on the treatment of anæmia is obvious, providing as they do a physiological foundation for the well-known value of rest in bed in the treatment of that affection. Inasmuch, however, as the effect of exercise is to stimulate the production of hæmoglobin, while that of rest is to lessen its destruction, it may be objected that the conclusions to be drawn from these data are in mutual contradiction. It must be borne in mind, though, that the observations were made on normal subjects, in whom the temporary increased destruction of hæmoglobin brought about by exercise is fully met and repaired by increased formation. To complete the investigation it is necessary to determine by diurnal observation of the blood of an anæmic subject taking considerable exercise, whether the reproduction of the hæmoglobin would be sufficient to make good the loss occasioned by exercise. The undesirability of keeping a patient sufficiently long under observation without treatment has prevented me examining this point. From clinical experience we may infer with tolerable certainty that construction would fall short of destruction, or at least would not be in excess of it as is the case in health. In other words, that the already seriously diminished amount of hæmoglobin would be unable to respond to the call made upon it by exercise, so that gradually the total amount would be further lessened. Rest, on the other hand, by removing the drain, would enable the constructive process to exceed the destructive, and the store of hæmoglobin to be gradually built up.

MODE OF OBSERVATION.

The instruments used in the collection of these data were the hæmoglobinometer and hæmocytometer devised by Oliver.¹

REFERENCES.

- ¹ Croonian Lectures, *Lancet*, vol. i, 1896. ² *Compt. Rend. Soc. Biol. Paris*, tomes cxl, cxlii. ³ *Compt. Rend. de l'Acad. des Sciences*, 1895, vol. ii, No. 6. ⁴ Allbutt's *System of Med.*, vol. i, p. 378. ⁵ "Chlorosis," by E. Lloyd Jones, p. 24. ⁶ "Ueber die Ursache der Hellwirkung des Aderlasses, bei Chlorose," *Wien. Med. Presse*, 1893.

THE ROYAL BERKSHIRE HOSPITAL.—The Prince of Wales, on the occasion of his visit to Reading on June 11th to open Reading College, visited the Royal Berkshire Hospital. The Prince, who was accompanied by Prince Christian and Lord Wantage, Lord Lieutenant of Berkshire, was received by the Vice-President, by the Senior Physician, Dr. Marriott, and by the Senior Surgeon, Mr. Maurice, by whom he was conducted through the various wards, the other members of the medical staff being present. The Prince spoke sympathetically to several patients, and remarked on the cleanliness, cheerfulness, and capacity of the wards, and commended the open air verandahs at the end of each ward which are used for convalescent patients.

A CASE OF EXOPHTHALMIC GOITRE WITH UNILATERAL EYE SYMPTOMS.

By JAMES HINSELWOOD, M.A., M.D., F.F.P.S. GLAS.,

Surgeon to the Glasgow Eye Infirmary; Dispensary Physician to the Western Infirmary; and Assistant to the Professor of Clinical Medicine in the University of Glasgow.

EXOPHTHALMIC GOITRE is a disease which of late years has been the subject of much difference of opinion as to etiology, pathology, and treatment. Many of the disputed points can only be solved by the lessons of clinical experience, and hence the value of the clinical record of any case of exceptional character. The following case, presenting several features of great clinical interest and rarity, has seemed to me worthy of special record and comment.

J. W., an unmarried woman, aged 24 years, came to the Glasgow Eye Infirmary on February 11th, 1898. She stated that since the beginning of this year her friends had been calling attention to the peculiar prominence and staring appearance of the left eye, which had gradually become more and more pronounced. About the same time her attention was also called to the fact that there was a distinct swelling of the throat, which had gradually become worse. Since the appearance of these symptoms she had felt somewhat nervous, being more easily excited and startled than she used to be. But in other respects she had felt quite well.

Her left eye had a prominent and staring appearance, which gave the patient a very peculiar look. There was slight exophthalmos, but what gave the eye its peculiar appearance was a strong retraction of the upper lid (Stellwag's symptom), so that the palpebral aperture was very much greater than on the other side. On asking the patient to look downwards, there was but little descent of the upper lid, while the globe rotated downwards in a normal manner (Graefe's symptom). The appearance and movements of the right eye were normal. A considerable uniform enlargement of the thyroid gland was found. There was no tachycardia, the pulse being about 72 per minute, and no history of palpitation. The patient was well coloured, and there was no menstrual disturbance.

She was put upon gradually increasing doses of antipyrin, beginning with 5 grains thrice daily, and decided improvement was evident within three weeks of the commencement of the treatment. She was shown at a meeting of the Glasgow Medico-Chirurgical Society on March 18th, 1898, and the following is a brief statement of her condition: The exophthalmos and retraction of the upper lid of the left eye have disappeared, so that when the patient looks straight forward there is no difference observable between the two eyes. In fact she is cured of the disfiguring appearance for which she sought relief. When she looks downwards, however, there is still very defective descent of the left upper lid—that is, the Graefe's symptom has persisted unchanged. The enlargement of the thyroid is very markedly diminished, although yet quite distinct. She feels better as regards the nervousness since the antipyrin treatment was begun.

Although there was here no increased frequency of the heart's action, the symptom, which is generally regarded as the most constant, and that which occurs earliest, still there can be little doubt that here we have a case of exophthalmic goitre in the early stage. The three classical symptoms, the tachycardia, the enlargement of the thyroid, and the exophthalmos do not appear simultaneously, and the degree of completeness of the clinical picture will depend upon the stage of the disease at which the patient is first seen. When the disease is fully developed the diagnosis is easy, but in the early stages, the true character of such atypical cases is apt to be overlooked, and yet here the diagnosis is of the utmost importance, since it is at this stage our opportunities of successful treatment are greatest. Hence the importance of knowing that unilateral exophthalmos may be the first symptom of this disease. Two years ago I saw in private a case precisely similar to the present, where unilateral exophthalmos was the first and most striking symptom of the disease. The patient was a young lady, and consulted me with reference to the disfiguring appearance of a staring and prominent left eye. Here, too, the presence of Stellwag's and Graefe's symptoms made the diagnosis clear, which was further confirmed by a slight fullness of the thyroid and slight tachycardia. Hence in every case of unilateral exophthalmos the possibility of its being a manifestation of exophthalmic goitre should always be borne in mind, and the patient carefully examined.

A point of great interest in this case is the disappearance of the retraction of the upper lid (Stellwag's symptom), whilst the non-simultaneous descent of lid and globe of eye remains unchanged (Graefe's symptom). These two symptoms are commonly regarded as being due to the same cause, namely, spasm of Müller's muscle, those unstriated muscular fibres in the upper lid which are supplied by the sympathetic. The complete disappearance of the one symptom while the other remains unchanged clearly

demonstrates that these symptoms are entirely distinct and dependent upon different causes. While Stellwag's symptom may be explained by an affection of the sympathetic, we must seek another cause to explain Graefe's symptom, which is really a disturbance of the co-ordinated movement of the simultaneous descent of the upper lid and globe of the eye, and which is probably due to a central disorder of the oculomotor nuclei. The present case, at least, makes it clear that these symptoms are independent and cannot be accounted for simply by an affection of the sympathetic.

The improvement of the symptoms under the use of antipyrin is a fact of considerable interest. The negative evidence of pathological anatomy and the character of the symptoms make it probable that this malady is a neurosis, and that the disturbance is one of function and of the nutrition of the nerve elements as in epilepsy and chorea. In these latter conditions antipyrin has given excellent results, and hence it is not surprising that its administration should benefit exophthalmic goitre. The dose has been gradually increased from 5 to 15 gr. thrice daily, and the marked improvement already manifest leads us to hope that greater benefit will result from pushing the drug still further.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

AN ACUTE CASE OF LANDRY'S PARALYSIS.

THE patient was 54 years old, tall and muscular, and had known scarcely any previous illness. During the last eight years his employment was in chemical works; while for 22 years previously he was working in a whitelead factory, but never had any lead poisoning. Throughout the week previous to the day of attack he was exposed more than usually, and complained of feeling the cold.

On March 27th he finished work in the engine-room at 8 A.M., and walked home about a mile. He told his wife that his hands had been tingling, and felt benumbed for two hours. He was disinclined for food, took some pills, and tried to sleep, but was unable. At midday some food he attempted to swallow "would not go down." At 5 P.M. some tea he was drinking "went the wrong way," and he had a violent fit of coughing. His son fetched me hurriedly. I found him in an exhausted condition, seated on a chair. The coughing had subsided. In a husky voice he complained of inability to swallow even his own spittle. He rose from his seat with difficulty, using his hands as though there were some lumbar weakness. On examining the epiglottis with my finger pharyngeal reflex was absent. The soft palate was freely movable. His power of grip was not subnormal.

At midnight he was in bed well propped up with pillows, but nevertheless his neck and back were so weak that his head and body had to be supported continually. At his own request he was lifted out of bed for defæcation, and seemed quite helpless. Inspiration was hurried, spasmodic and stridulous. His voice was hoarse and weak. Saliva had accumulated in his pharynx, which he could neither expectorate nor swallow, and which he wiped from his lips continually as it ran out abundantly. He could raise his forearms for this purpose, but could hardly move his arms. Pronation and supination were weak and limited. Wrists and fingers moved freely, but his grip was decidedly weaker. He could raise his knees from the bed 4 inches against considerable resistance, and could freely move his ankles and toes in all directions. Knee-jerks were present, plantar reflexes normal. He complained that the tinglings and numbness in hands and feet were very distressing. He felt his want of sleep, but could not obtain any because of choking.

At 8 A.M., March 28th, the only unparalysed muscles were the facial, lingual, masticatory, flexors and extensors of fingers and toes, upper intercostals and diaphragm. All reflexes were absent. No involuntary movements or rigidities were present. The spleen was just palpable. Gradually every muscle became paralysed. At midnight he could just open his mouth sufficiently to protrude his tongue half an inch. His respiration was in short gasps, about every

second, and entirely diaphragmatic. Pulse about 2 per second, regular, but weak. Temperature 95.2°. Spleen easily felt 3 inches below ribs. He died at 1 A.M.

The age of the patient, the acuteness of the attack, and the course of the paralysis differed from previously-described cases of Landry's disease.

The muscles were affected symmetrically, and approximately in the following order: First, the pharyngeal, laryngeal, spinal, and cervical; then those of the hips, thighs, shoulders, and arms; next, the lower intercostal and abdominal; followed by those of forearms, legs, hands, feet, and upper ribs; lastly, facial, lingual, labial, and diaphragmatic muscles.

He never had pain or loss of sensation; the tingling and numbness in the extremities were the only sensory symptoms. The mental condition remained unaffected to the end. The temperature was subnormal throughout.

Northwich. HENRY H. HAWARD, M.B., B.C., etc.

HÆMATEMESIS TREATED BY PERCHLORIDE OF IRON.

In a memorandum in the BRITISH MEDICAL JOURNAL of February 26th, Mr. St. George Reid speaks of the value of perchloride of iron in hæmatemesis, and I thoroughly coincide with his views.

This treatment I have adopted for some years. A few months ago a man called at my house in a great hurry, and drove me over four miles to see his daughter, aged 17, who had been vomiting blood. On my arrival I found her anæmic, with very pale lips and an extremely feeble pulse. She had vomited about two pints of blood (which I saw), and was suffering from symptoms of gastric ulcer. I commenced by giving her 15 minims of the liquor ferri perchloridi (the preparation I prefer), and this was repeated every three hours and then every four hours for about four days, after which it was given thrice daily. I also gave her some brandy in ice-cold milk, and she took nothing but ice-cold milk for the first few days, when, as she so quickly rallied and had no return of the hæmorrhag, I was enabled gradually to increase her diet. As her improvement in a few hours was so marked, and as there was no more tendency to sickness, I did not employ rectal feeding, although I should have done so had there been any difficulty with the stomach. She made a good recovery and has been in good health ever since.

Wolston, near Coventry.

ARTHUR PURKISS, M.D.

REPORTS

OF

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

SIR PATRICK DUN'S HOSPITAL, DUBLIN.

A CASE OF PYÆMIA TREATED WITH ANTISTREPTOCOCCUS SERUM IN WHICH LIVING STREPTOCOCCI WERE FOUND.

(Under the care of C. B. BALL, M.D., F.R.C.S.I., Regius Professor of Surgery, University of Dublin, and Surgeon to Sir Patrick Dun's Hospital.)

[Reported by H. E. LITTLEDALE, M.B., B.Ch., House-Surgeon.]

J. B., aged 10, admitted on March 8th, 1898, stated that he had become ill two days previously rather suddenly, with headache, *malaise*, slight rigor, and great pain in the knee.

He was in a very dirty condition. His feet were covered with cuts and scratches which were full of dirt. His right knee was greatly swollen, red, and exquisitely tender; the glands in the right groin were enlarged; the tongue was thickly furred and dry, and the temperature was 101.4° F., and the pulse 124. Icebags were applied to the knee, and sodium salicylate given. As this treatment after two days caused no improvement, and the knee was becoming more inflamed and swollen, carbolic poultices were applied frequently. A small abscess had formed in the sole of the foot, which was opened with great care so as to get the pus as pure as possible for culture purposes. The culture was taken on blood serum, and kept at 98° F. Very little sign of growth occurred for