ASSOCIATION MEDICAL JOURNAL:

BRING

THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

No. CCVI.

LONDON: SATURDAY, DECEMBER 13, 1856.

Hospital Reports.

ST. GEORGE'S HOSPITAL.

ENDOCARDITIS: ANÆMIA: REMARKABLE SLOWNESS OF PULSE: WITH REMARKS.

By G. GODDARD ROGERS, M.D., Medical Registrar to the Hospital.

My attention having been lately directed to endocarditis, I found the two following cases amongst my notes; and although a year has elapsed since their occurrence, they are not the less deserving of record.

CASE I. (Under the care of Dr. BENGE JONES.) H. E., aged 33, was admitted on October 24th, 1855. He was accustomed to work in a cold and damp room at the shoe-making business; and he had been suffering from cough, more or less frequent, for a twelvemonth. Ten years ago, he resided in America, and was of opinion that he had never been robust since he quitted England. For about a week before admission, he had spat blood in small quantities; and for three days had had a succession of fainting fits. When first seen, he was very pale; the tongue was clean; bowels open; appetite pretty good; urine healthy; pulse remarkably slow, but quite regular. This slowness of the pulse had never been mentioned to him by any of his former medical attendants. At first, it was 38 per minute, then 40, at which it continued two or three days. The liver was enlarged; and there was extended dulness in the præcordial region. A few moist crepitations existed at the back of both lungs, and he expectorated thin brownish mucus. Strong ammonia embrocations were applied to the chest, and citrate of iron was given three times a day; but this was soon discontinued, as it caused headache.

October 28th. He complained of "swimming in the head", which was increased by the recumbent posture; he also spoke of seeing everything double. The pulse still averaged 40 per minute.

October 31st. After passing a restless night, he had more uneasiness in the head; but his scalp was cool, and pupils perfectly natural. At 11 A.M. the pulse was 32 per minute; at 1 P.M. 30; and a little later 28. Subsequently it was reported to have been as low as 25, and even less. About 2 P.M. he had what appeared to the nurse an epileptic seizure. Three fits occurred within half an hour. He then remained tranquil, the pulse getting weaker, and died about 3 P.M.

At the examination, twenty-three hours after death, the dura mater and inner surface of the parietal and frontal bones were found very vascular. The convolutions of the brain were flattened and dry; there was but little fluid in the ventricles; and the brain substance was healthy. The pericardium contained some opaque reddish fluid. The heart was large and flabby, its right cavities of normal size, and the lining membrane in both healthy. The left cavities were both dilated; the walls, more especially of the ventricle, were atrophied; and the columnæ carneæ smaller than natural. The valves were healthy. The endocardium covering the left side of the septum was opaque and thickened; and in the muscular substance beneath there was a thick uniform layer of fibrinous deposit of a pale amber tinge, which, in its extent, corresponded with the opaque endocardium. The deposit was firm, of leathery

consistence, and of fibrinous character. The lungs and all the abdominal viscera were deeply congested.

CASE II. (Under the care of Dr. NAIRNE.) H. N., aged 30, engaged as a carman, was admitted on November 7th, 1855, in an anæmic and emaciated condition. He stated that his health had always been excellent until the previous summer, when he suffered much from hæmorrhoids, and lost a great deal of blood. In two months he was well again, and continued so until six or seven weeks before admission, when he became the subject of epileptic seizures, which lasted three weeks. He also vomited large quantities of blood three separate times. His tongue was clean; skin cool; bowels rather costive; urine healthy; heart's action somewhat feeble; pulse quite regular, but only 48 per minute. On further questioning him, we found he had suffered seven years ago from acute rheumatism. As he complained of slight cough, an expectorant draught was ordered, but was changed in two or three days for a steel mixture. The pulse continued very slow, and the heart's sounds were distant and muffled.

November 16th. He said he felt better, and he continued to improve until the 21st, when he had a fainting fit, and complained all the rest of the day of giddiness. The pulse was now only 36 per minute.

December 3rd. He rallied, but spoke of pain around the right eye.

December 12th. Acute pain came on in the loins, and a sense of oppression at the chest.

From day to day the pulse fluctuated between 36 and 50 beats per minute. Beyond increasing weakness, no change calling for notice took place: and he died on the 17th.

The examination was made twenty-four hours after death. All the organs were deeply congested, and the blood was remarkably fluid. The pericardium was distended with turbid serum, containing many flakes of lymph. The heart was covered with fat; it was large and soft; and the walls of both ventricles, but more especially of the left, were much hypertrophied. In the septum, between the ventricles, and also in the posterior part of the left ventricle, were several large masses of fibroid deposit of a firm consistence, and of a yellowish white colour. To such an amount did this deposit exist on the right side of the septum, as to form a marked bulging into the ventricular cavity. Corresponding to this part, the endocardium was thickened and opaque, as was also the case on the left side of the septum. There was a little atheromatous deposit at the root of the aorta. The valves were quite healthy.

REMARKS. These cases illustrate the insidious progress of endocarditis, and the perilous conditions to which it gives rise. Our knowledge of the disease in its pure form is comparatively limited. Combined with pericarditis, it is often scarcely to be recognised, the friction sound overpowering all others; and if the valve flaps escape the inflammation (which happened in both these patients) small ground is afforded for the diagnosis of endocardial inflammation *per se*. A murmur more or less distinct can generally be detected after all friction sound has subsided; therefore in the exceptional cases we may presume, but cannot positively affirm, that there is some inflammation of the lining membrane of the heart. Dr. Hope was of opinion that endocarditis more frequently existed without pericarditis than pericarditis without endocarditis. The contrary view is adopted by Dr. Stokes, and the records of St. George's Hospital during the last five years bear out his statement. Certainly, if we were to rank all cases of

valvular disease, even of recent date, as examples of endocarditis, we should have abundant instances of the latter disease. But from time to time pericarditis is unrecognized during life, and disturbs the action of the heart but little; therefore we shall err in setting down as simple endocarditis cases in which opportunity is not afforded for *post mortem* examination. In these two patients, where the endocardium was so extensively affected, there had been at some period of their history pericardial inflammation; though it was subordinate to the other affection, and much of the effusion into the serous sac was the result of *post mortem* change. The state in which the heart was found had either been brought about by intense inflammation with an injected condition of the cellular substances, followed by serous infiltration pressing on the muscular fibres, and thus directly weakening them, or diminishing their consistence. Or, this weakness might have been secondary, there being first the common condition of inflammation of a tissue in close connexion with muscle; viz., excitement, followed to undue extent in these cases by depressed vitality of the contiguous muscular fibre, which persisted. The weakened contractile force of the heart would cause smallness, irregularity, and feebleness of the pulse; but not necessarily *slowness*. This might or might not depend wholly upon "nervous paralysis of the heart's cavities," from the morbid changes extending to the cardiac ganglia; but I think a mechanical reason may be given to account in some measure for it. From the congested state of every organ after death, we may infer that the same condition was present to a great extent during life; and the heart must have partaken in this repletion. With weakened, atrophied muscular fibre, and inelastic lining membrane, the organ refused to be stimulated by the normal influx of blood into the systemic ventricle; but a gorged condition arising, the blood slowly oozed into the aorta, and was conveyed at a sluggish pace over the body.

We may explain the changes in the nutrition of the muscle and its atrophy, by adopting Dr. Hodgkin's idea of defective nourishment, from partial blocking up of the coronary arteries by this fibroid deposit. Unfortunately, these vessels were not examined.

I regret, also, that percussion was not employed for the purpose of testing the undue sonorousness of the chest, by which, according to M. Lavirotte (*Rev. Med. Chir.*, tom. xviii, p. 229), we may diagnose fibrinous concretions of the heart. If polypus obstructs the circulation, causing the lungs to receive less blood, and thus rendering them less dense, thickened endocardium, bulging into and diminishing the calibre of the ventricles, would act in the same manner.

We may have hyperæmia and anæmia each producing cerebral symptoms, such as were witnessed in these cases; but there can be little doubt that here a defective supply of blood to the brain was the cause of them. Yet there probably was at times a state of passive congestion, causing hebetude and headache; and the second patient told me that he had been much troubled with epistaxis for a week or two before admission.

BIRMINGHAM EYE INFIRMARY.

CASES ILLUSTRATIVE OF SOME OF THE ADVANTAGES OF OPERATING UPON A FULLY FORMED CATARACT: ALSO OF THE ERRONEOUSNESS OF THE DOGMA "THAT THE LOSS OF A LENS ENTAILS CONFUSED VISION UPON THE PATIENT."

By J. VOSE SOLOMON, F.R.C.S., Surgeon to the Birmingham and Midland Counties Eye Infirmary; formerly Honorary Surgeon to the Birmingham General Dispensary.

[Continued from page 541.]

CASE XXIX. *Destruction of the Right Lens: Large Objects plainly Seen at Five Yards Distance: Vision not confused when the Eyes are open.* Charles Goodwin, aged 14, residing at 17, Darwin Street, had a traumatic cataract extracted by me from the right eye, and the opaque capsule lacerated

by the canula scissors, on June 12th, 1856. This operation was followed by a good deal of retinal irritation, and by spasmodic convergent strabismus, which slowly subsided. On the 12th of November, 1856, his statement is, that he sees as well as ever he did in his life when both eyes are open. He has never seen double, nor had a confused view of external objects. If the left eye be closed, fowls and large objects are plainly seen at four or five yards distance. A two inch and six inch cataract glass respectively accommodate the eyes to near and to distant objects. Slight strabismus is observable when the boy is excited. The eyes are small. Considerable improvement will, I doubt not, take place in the vision of this patient.

CASE XXX. *Destruction of the Right Lens: No Confusion of Sight: Luminous Objects Magnified by the Eye Operated upon.* Nathaniel Lamb, 22 years of age, a clerk in the goods station of the London and North Western Railway, applied to me at the Birmingham Eye Infirmary, on account of a fully formed and soft cataract of the right eye, which appeared in all other respects healthy. The left he considered to be perfect, but, after full dilatation of its pupil by a solution of atropine, topically applied, I found marginal opacity. He is long-sighted. July 27, 1856, I performed the operation of solution upon the lens of the blind eye; no inflammation followed; and the cataract was absorbed without any further interference, leaving the eye everything that could be wished; the pupil being central, black, and acutely sensitive to the impression of varying degrees of light upon the retina. November 14, 1856. The patient declares that he follows his employment with as much ease and comfort as he did before the operation; consequently, he is in no haste to obtain a cataract glass. Houses are seen clearly at a hundred yards distance, and one inch letters at eighteen inches when the left eye is closed. A very curious phenomenon is present when a luminous object, as, for instance, a lighted candle, is viewed by the lensless eye alone; which is, that it is magnified one-third, but the outline is distinct, and the form unchanged. Two weeks since, this magnifying power was greater than at present.

November 28th. Since writing the above, Lamb has obtained a double convex lens, of eight inch focus, which adjusts the eye to distant objects. The glass does not correct the peculiarity we have mentioned, unless he is in a room, and then the object is increased one-sixth only.

CASE XXXI. *The Vision gained by the Destruction of a Traumatic Cataract highly prized by the patient.* Elizabeth Tranter, 16 years of age, residing near the Windmill, Smethwick, suffered on the 6th of June, 1855, a blow upon the right eyeball, from a stick. She received judicious medical treatment; but, nevertheless, came to the Eye Infirmary on the 21st of June. I then noted the following appearances. A cicatrised wound extends from the centre of the cornea perpendicularly downwards, the sclerotic having been divided to the extent of one sixth of an inch. The iris is united to the cicatrix. A small and almost round pupil is placed behind, and above, the summit of the corneal opacity; the pupillary aperture is grey from the presence of a cataract in the course of solution. As there was a good deal of irritability of the eye, I directed the patient to take half a scruple of cinchona bark twice a day, and to use a solution of atropine to dilate the pupil. On the 17th of August, the eye being quite tranquil and the weather warm, I broke up the lens with a fine cataract needle, not in expectation of giving useful sight, but to improve the expression of the eye, which is prominent and dark. In a fortnight afterwards I again used the needle, in order to clear the pupil of some capsule. No irritation worthy of note followed these proceedings. The girl ceased to attend, and would have entirely passed from my mind, had it not been that her parents wrote me a letter, full of gratitude for the relief their daughter had received.

On the 16th of November, 1856, Elizabeth Tranter called upon me. She stated that the operation upon her eye had enabled her, in a few days afterwards, to