

position with a snap, audible to me and sensible to the men making extension. I contented myself then with tying the man's feet together, and he recovered perfectly without a single drawback, and was at his work as well as ever in two weeks.

The clear and intelligible account of this accident, given above, was fully and independently corroborated by the European officials, who informed me afterwards that they found the man in the space between the platform and the wheels, that his right leg was bent upon and across his belly, and that it was kept in that position by the under surface of the lower foot-board, until the carriage was raised, after which he had no power in it. The height of the footboard from the ground was nineteen inches. This case of backward dislocation of the hip would have remained in oblivion but for the appearance in THE LANCET of Feb. 17th, 1877, of a paper upon "Dislocations of the Thigh," read by Mr. Henry Morris before the Medical and Chirurgical Society, on seeing which this case recurred to me as leading to different conclusions from some of those arrived at by that gentleman—namely, conclusions 4, 5, and 11.

No. 4 asserts that all dislocations of the thigh, unaccompanied by fracture, occur while the limb is abducted. Now, in the above-noted case there was certainly no fracture of the femur nor acetabulum, as evidenced by the speedy recovery without apparatus, and the absence of deformity; and as to the position of the limb during the accident abduction was simply impossible. The facts of the case and the evidence lead irresistibly to the conclusion that it was in a state of flexion and adduction.

No. 5 asserts that posterior dislocations result when flexion and inward rotation accompany abduction. With regard to this statement, I think there could have been no rotation once the knee was caught by the foot-board, and therefore rotation of the limb on its axis must be excluded as an essential element of backward dislocation.

No. 11 asserts that direct dorsal dislocations, or those which are said to occur during adduction, are always the result of immense violence, and are always associated with fracture of the acetabulum, or of the head of the femur, or of both. Now in this case, while there was enormous force applied to the tibial end of the femur, while that bone was being flexed and adducted on a fixed pelvis, no fracture whatever occurred. I do not mean to convey that backward dislocations may not occur through inward rotation and abduction, but it must be conceded that such conditions are not essential, any more than is fracture of the neck of the femur or acetabulum.

Naini Tal, India.

CASE OF

ABSENCE OF THE INTER-AURICULAR SEPTUM, WITHOUT CYANOSIS, IN A MAN AGED FORTY.

By RICHARD CATON, M.D., M.R.C.P. LOND.,
HON. PHYSICIAN TO THE LIVERPOOL NORTHERN HOSPITAL.

WRITERS on heart disease have long been divided in opinion as to the causes of cyanosis. The fact that a patent foramen ovale or other abnormal communication between venous and arterial channels often coexists with that condition has naturally led to the view that it is due simply to the circulation of mixed arterial and venous blood. This appears indeed, at first sight, a most natural and sufficient explanation, and it has been adopted by many writers of eminence. Other authorities, again, among whom may be mentioned Laennec, Morgagni, Louis, Hall, Peacock, and more particularly Stillé, explain cyanosis otherwise, the last-named writer especially contending that it may exist without any admixture of arterial and venous blood, and also that complete admixture may occur without giving rise to cyanosis.

The following case is interesting as an example of the last-named proposition. In the journals and in the Transactions of various Societies I have met with numerous cases of open foramen ovale in the absence of cyanosis, the opening being in some few instances as large as a shilling. But the case here narrated is more remarkable than any, for the

auricles being much dilated, a disc three inches in diameter could be placed in the aperture between them without undue stretching.

August L—, aged forty, was admitted into the Liverpool Northern Hospital on Dec. 10th, 1877, suffering from dyspnoea, oedema of legs, and ascites. Patient is a powerfully-built and muscular man, who has had good health all his life, excepting that three months ago he had an attack like the present one. He has been for twenty years at sea. A fortnight ago he caught a severe cold, which brought on a cough with profuse expectoration, and a week later was followed by dropsy. On admission, patient was somewhat cyanosed, and had much cough and expectoration. Pulse 50, intermittent and unequal; temperature 100°; arteries rigid; cardiac dulness greatly enlarged; sounds normal; veins on left side of neck dilated and pulsating synchronously, with cardiac diastole, and filling from below; lungs resonant on percussion; expiration prolonged; crepitation at both bases, and râles in nearly all other parts; alimentary system normal, excepting that the tongue is slightly furred; urine pale, acid, sp. gr. 1007, no albumen. The treatment consisted in milk diet, the use of a gentle expectorant mixture, and rest in bed. Under this he rapidly improved, cyanosis, oedema, and ascites entirely disappeared, and the râles and crepitation nearly so.

Towards the close of December he had a relapse; temperature went up to 102° F., and he complained of sore-throat, headache, and pain in the back. A little albumen and a few granular casts appeared in the urine. There was also some return of cyanosis and of dyspnoea. In a few days these symptoms again subsided, and he appeared quite well. He was free from cyanosis and dyspnoea; could walk with ease, and ascend the stairs to the top floor of the hospital with little difficulty. Cardiac dulness unaltered; pulse still slow and intermittent. Believing himself quite well, and being determined to return to work, he was discharged on the 18th of January, after being duly cautioned.

The patient was readmitted on the 29th of January, much cyanosed and with great dyspnoea; lungs full of crepitation and râles. On the next day, while attempting to get out of bed, he fell dead on the floor.

Necropsy, twenty-four hours after death.—The pericardium was largely adherent; ventricles, auricles, and appendices were greatly dilated. The pulmonary artery was unusually large, as also were its branches throughout the lungs. All the valves were apparently healthy. No communication existed between the aorta and the pulmonary artery. There was no partition between the auricles; a small fold of endocardium showed the line of demarcation between them, and, as mentioned above, a disc of cardboard three inches in diameter just fitted the orifice. Nothing was noted of importance in the other organs.

Considering the extraordinary size of the aperture between the auricles, and the slow action of the heart, it looks almost as certain that the venous and arterial blood must have mixed as it is that milk and coffee do when poured into a coffee-cup, and yet, under ordinary circumstances, there was no cyanosis and no impairment of muscular and nervous activity.

Liverpool.

EMBOLISM OF THE BRACHIAL ARTERY FOLLOWED BY GANGRENE OF THE HAND AND FOREARM.

By RICHARD T. GORE, F.R.C.S.

MRS. H—, living about twenty miles from Bath, had a miscarriage at the latter end of November, 1867. When partially recovered, though a uterine discharge still continued, she was exposed to extreme cold at night. Up to Dec. 10th, she had suffered for some days very severe pain in the left hand and forearm. On Dec. 16th, it was found that all pulse in the radial and ulnar arteries had ceased, and the former could be felt at the wrist as a solid cord. Paroxysms of severe pain continued for several days, especially about the elbow. Sensation remained perfect, and there was very little reduction of temperature until Dec. 26th. At that time all pulsation had ceased up to the middle of

the brachial artery, which formed a solid cord, with some thickening at the bend of the elbow. The nails and ends of the fingers now began to have a faint purple tinge; and there were two discoloured patches on the back of the hand. The return of blood by the veins at the bend of the elbow is very tardy. The pulse at the other wrist is about 90, and very feeble. The action of the heart is quite natural; the tongue red, and rather dry. A slight muco-purulent discharge from the uterus continues, but there is not any uterine tenderness. She sleeps fairly in the intervals of pain, which is not continuous.

Dec. 31st.—She is considerably relieved from pain; the hand and fingers are cold, reddish-purple, and shrivelled; the coldness and discolouration extend nearly to the elbow; no pulsation is to be felt in the brachial artery below the margin of the axillary artery, and there very imperfectly. Pulse at the right wrist 120. Tongue red, glazed, and aphthous.

Jan. 9th, 1868.—In this interval she had much improved in health, taking food and stimulants in fair quantity. The pain has nearly ceased. The hand and forearm are dry, with a few blisters about the bend of the elbow, and a faintly-marked line of demarcation just above it.

11th.—I amputated the arm about midway between the elbow and shoulder, making two flaps. The brachial artery and vein were blocked up with solid coagulum. Not any artery needed a ligature, and there was scarcely any oozing from the cut surfaces. The edges of the wound were brought together with wire sutures, and dressed with a strip of lint moistened in tepid water. Immediate union took place by adhesion, and henceforth recovery was rapid and uninterrupted.

The arteries in the hand and forearm were blocked up at all points, and the muscles shrunken, and of a dull purple colour.

No doubt in this interesting case the starting-point of the mischief lay in the congested state of the uterine vessels, accompanied probably by an unduly plastic state of the blood, leading to the formation of a clot and embolism of the brachial artery, forming in the whole a good specimen of dry gangrene, independent of injury.

The patient was under the immediate care of Dr. Bishop, of Calne, to whose diligent care and attention throughout her well-doing was greatly to be attributed.

Bath.

SUBCUTANEOUS INJECTION OF CURARA FOR CHOREA.

By R. T. WRIGHT, M.D., F.R.C.S.,
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ATTENTION having been drawn to curara by Mr. Alfred Simson¹ and by Dr. D. Drummond², notes of the following case may be of interest.

Mr. S. C—, aged seventy-eight, widower, farmer, of Hopton, Shropshire, a tenant of Viscount Hill, was an object of much local sympathy, on account of his suffering from true chorea for three years, which had resisted all sorts of treatment; so I was asked to see him in consultation. I visited him with Dr. John Lyon and Mr. W. Gill, son of Lord Hill's agent, and found him almost worn out by jactitations so constant and so violent that he was thrown off his bed, unless protected by railings on every side. He could not walk, and his speech was quite unintelligible, except that a few monosyllables, such as "tea," "no," "here," were shouted out with a painful effort. His spirits were very low, he had great difficulty in swallowing, and he could scarcely ever fall asleep without a dose of chloral hydrate, of which he was very fond, as he was quiet only when asleep. Fortunately his appetite was very good and his bowels regular, though he had no teeth and he was always eating sweets. It seems his family is subject to chorea; several relations had it at various times of life, and his mother, who died at the age of eighty-five, is said to have suffered from chorea for several years before her death. He was so restless that it was impossible to ascertain his pulse, respiration, or temperature; his urine on examina-

tion was found to be clear, neutral, of sp. gr. 1010, free from albumen or casts, but it threw down a faint cloud of phosphates with heat, which readily dissolved with a little nitric acid.

As curara had been recommended in hydrophobia, I suggested it might be tried in chorea, so solutions of the following strength were injected subcutaneously on the dates specified. Jan. 21st, 1878, one-twentieth of a grain; Jan. 22nd, one-twentieth of a grain; Jan. 26th, one-tenth of a grain; Jan. 28th, two-tenths of a grain; Jan. 31st, four-tenths of a grain.

On Feb. 2nd four-tenths of a grain of curara were injected. Pulse (felt for the first time) 68, regular. The jactitations were now far less violent, and both the patient and his relatives remarked the improvement without any bad effect. Four-tenths of a grain were injected on Feb. 4th, 5th, 6th, 7th, 8th, 9th, and 10th, by which date he was perfectly quiet, able to walk without help, and could sleep at night without chloral. He had no other medicine at all but curara since the subcutaneous injection treatment was begun. Four-tenths of a grain were injected on the 14th and 18th; on the latter date he spoke a sentence, slowly, but plainly, and readily intelligible by listening attentively. On the 19th four-tenths of a grain were injected, the patient being in remarkably good spirits. The same quantity was injected on the 22nd, on which day Mr. C— put on his spectacles and read his Bible—the first time he had been able to do so for three years.

From the last date he has been kept quiet by injecting four-tenths of a grain of curara twice a week. His speech is still of abnormal character; but he will not submit to the operation more than twice a week, as he has a morbid dread of the pain, and often breaks the nozzle of the syringe by his frantic struggles when the doctor approaches him. His relatives say he always, even when in health, had a morbid dread of pain, never would wash in cold water, and howled piteously at the slightest scratch. He was sent to Matlock at the outset of his treatment to have proper shower-baths, but he would not stay a week, as he dreaded the water.

The preparation used in Mr. C—'s case was by Messrs. Savory and Moore, in the form of discs of gelatine, a quarter of an inch square. It is made of three strengths, in which each disc contains respectively one-hundredth of a grain, one-twentieth of a grain, and one-tenth of a grain, so that it is easy to obtain a solution of any desired strength. A few drops of water are placed in a spoon; then the discs required for use are added, and the fluid is warmed over a lighted taper; stirring, if necessary, to assist solution. It is necessary to clean the syringe with warm water directly after use, as curara is very sticky, and solidifies when cold so rapidly that it is apt to block up the nozzle of the instrument.

Parliament-street, S.W.

EXTRACTION OF STEEL AND IRON FROM THE EYE BY THE MAGNET.

By W. A. M'KEOWN, M.D.,
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THE following cases will doubtless be of interest, taken in conjunction with that not long ago brought before the Clinical Society of London by Mr. M'Hardy.

Dawson B—, aged twenty-four, smith's helper, applied to me at the hospital on Jan. 16th, 1877. He stated that three days previously his right eye had been wounded by a small piece of metal. I observed that the iris was attached to the lens at the outer part of the pupil by recent lymph, and that there was a limited opacity of the lens. There was a small clear metallic body sticking at the margin of the adherent pupil. I made a small section of the cornea, more peripheral than the pupil, introduced a pair of iridectomy forceps, and seized the body and a little piece of iris; but the body slipped from my grasp, and was gliding out of my reach. Fortunately, I had anticipated such an untoward event, and took care to have a pointed permanent magnet at hand. I introduced it into the wound. The metal was instantly attracted and withdrawn. The patient continued under my observation till the 16th February. The opacity of the lens remained limited to the part wounded. I believe the wound in the capsule was closed by lymph and healed. I have not seen nor heard from the patient since.

¹ THE LANCET, May 25th, 1878, p. 776.

² British Medical Journal, June 15th, 1878, p. 857.