

of an hour later he vomited a little blood, and expired shortly afterwards. He lived two hours from the time he was picked up.

Necropsy.—Externally there was a slight abrasion over the centre of the sternum; with this exception there were no other injuries on the body. On opening the chest the pericardium was distended, and on opening it I found it contained a quantity of uncoagulated blood. This I carefully removed, and then I could see that blood was oozing from the right auricle. On further examination I found that there was a laceration situated just between the auricular appendix and the commencement of the superior vena cava, measuring in length about a quarter of an inch and an eighth in breadth. The heart was slightly undersized and its muscular tissue was pale, while on the surface there was an undue amount of fatty deposit. This case, I have no doubt, was traumatic, although there is very little to prove it. With the exception of the abrasion over the sternum there were no other signs of injury. I am inclined to think that the condition of the heart predisposed to the lesion, as the accident which caused it could not have been severe, otherwise there would have been more contusion and injury to external structures.

Seamen's (Branch) Hospital, Albert Docks, E.

DIPHTHERIA ARISING FROM FAULTY DRAINAGE.

BY H. MALLINS, M.B.

THE remarks in THE LANCET of Feb. 20th, under the heading of "Insanitary Dwellings," leads me to briefly place on record an unequivocal case of the origin of diphtheria from faulty drainage, which came under my observation some five or six years ago. The case was that of a boy ten years of age, who was attacked with membranous sore-throat, followed in a few weeks by almost universal paralysis, a circumstance that proved its true diphtheritic nature. On endeavouring to trace the source of infection I found that the bed in which the boy slept was in a small room directly over the scullery, and that a most unpleasant smell had been noticed to pervade this room for weeks past. On examining the scullery sink it was found to communicate by an untrapped—in places broken—pipe with a cesspit situated about twenty-five yards from the house. There was, therefore, every opportunity for the foul air from the cesspit to be syphoned into the house. The patient was carefully isolated, and though one of a very large family of children no one else caught the infection. As there was not a single case of the disease in the neighbourhood, as the boy did not mix with any children except his own brothers and sisters, and, lastly, as he was the only one in the family sleeping in the line of escape of foul air, the conclusion seems irresistible that in this case, at all events, the diphtheritic poison was conveyed in the emanations from a foul drain, such emanations polluting the air that was nightly breathed. How the specific bacillus got into the cesspit is of course a very difficult matter to explain.

Watton.

CASE OF SYNCOPE DURING ETHER INHALATION.¹

BY A. C. WILSON, M.B., CH.B. VICT., &c.,
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THE following is an account of a case exhibiting grave and somewhat unusual symptoms while under the influence of ether.

A youth aged seventeen was admitted to the infirmary on Jan. 9th for a wound of the eyeball. He was well grown and free from any organic disease. Mr. Snell decided to enucleate the eye, and on Jan. 15th I administered ether in the usual way with Clover's inhaler. The patient took the anæsthetic extremely well, and was soon properly under its influence, as evidenced by the regular stertorous breathing, loss of corneal reflex, and contracted pupil. The ether apparatus was then removed, and Mr. Snell com-

menced the operation, but no sooner had he clipped round the conjunctiva and divided one of the tendons when suddenly the face and lips of the patient, up to this point of a good colour, became very pale. For a few seconds I thought he was going to vomit, but as there were no further signs of this, and as the breathing became sighing in character, and the pulse, previously full and regular, began to run rapidly down, the operation was at once stopped. We inverted the patient, drew forward his tongue, began artificial respiration and had the window opened. After doing artificial respiration for a few times we stopped for a moment to see if there were any response, but there was no breathing perceptible, and the pulse at the wrist was flickering. Artificial respiration was then resumed, flagellation resorted to, and the battery held in readiness. After some minutes the pulse improved, the patient was found to be breathing again, and he finally recovered completely.

A few points I wish to draw attention to: 1. The room was a small one, leading off from a larger one, and the air of both of these was, I think, exhausted by numerous out-patients. 2. The inhaler had been removed for quite one minute before the bad symptoms came on. 3. The extreme pallor the patient exhibited when at his worst. 4. His complete recovery. So far I have been unable to find any record of death from syncope during the administration of ether. Of eighteen deaths recorded under ether, the fatal result was due to asphyxia. How to explain the symptoms in my case appears difficult. Had the division of tendons of the eyeball anything to do with it? Mr. Mills, anæsthetist, at St. Bartholomew's Hospital, speaking of syncope from chloroform, says: "This shock is very marked when, in the operation for strabismus, the internal rectus is divided, the pulse often intermitting and remaining feeble for some minutes." Now, if this operation has a lowering effect on the heart during chloroform anæsthesia, is it not possible that there is a similar tendency while under ether? It is true that there is some doubt as to whether it was the internal or the inferior rectus which was divided; but, since they are supplied by the same nerve, it can, I think, make little or no difference. On the other hand, the syncope may have had no connexion with the operation; and it is on these points that I should feel grateful for any suggestions from more experienced members of the profession.

Addendum.—Since writing the above I find that there are two cases of failure of the heart's action during ether inhalation recorded—one, in THE LANCET of October, 1876, by Mr. A. S. Morton; and the other, in the *British Medical Journal* of May, 1877, by Mr. R. J. Pye-Smith. Doubtless other instances have been observed.

Sheffield.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. PANCRAS INFIRMARY.

A CASE OF SCIRRHOUS CANCER OF THE HEART.

(Under the care of Mr. C. DUDLEY COOPER and Mr. A. B. KINGSFORD, Assistant Medical Officers.)

DISEASE of the muscular walls of the heart of malignant nature is probably always of secondary character, and is of rare occurrence. Dr. Bristowe¹ writes: "Malignant disease of the heart and pericardium has rarely, if ever, been diagnosed during life, and, indeed, only gives evidence of its presence by symptoms referable to the heart. It is obvious, however, that the symptoms to be looked for are those indicative of cardiac obstruction and weakness, and that the supervention of such symptoms in the progress of malignant disease might suggest the possibility of cardiac

¹ Paper read before the Sheffield Medico-Chirurgica Society on Feb. 11th, 1892.

¹ The Theory and Practice of Medicine

involvement." In this case the absence of evidence of growth of any kind, primary or secondary, until the post-mortem revealed its presence, rendered diagnosis quite impossible.

George T—, a coach trimmer, aged forty-eight, was admitted into St. Pancras Infirmary on Dec. 7th in a semi-unconscious state, with a history of having been seized with right-sided paralysis and loss of speech on Dec. 4th. On examination of the heart the sounds were distant but distinctly heard, fairly normal in quality and regular in rhythm; the impulse was weak but not displaced, and the area of cardiac dullness was not increased. The patient improved slightly until Dec. 12th, when at 9 A.M. he suddenly became much worse; his temperature rose in a few hours to 107° F., and he died the same evening.

Necropsy.—On examination of the brain no hæmorrhages or emboli were found anywhere, but the left optic thalamus was decidedly softened as compared with that on the opposite side. On removal of the sternum several nodules were noticed on the surface of the heart showing through the pericardium, which, though completely adherent, was not involved in the growth. The ventricular walls were slightly hypertrophied, but the valves appeared perfectly normal. The chief seat of the growth was in the auricles; there were also several small masses about the apex, mostly involving only the outer half of the thickness of the (ventricular) wall, and nowhere projecting into the cavity of the ventricle. The endocardium of the auricles also was intact throughout; but outside this the walls of the left auricle were almost entirely formed by new growth, and attained a maximum thickness of one inch and a half. There were two masses of growth in the inter-auricular septum about the size of small filberts. The anterior wall of the right auricle also was almost entirely replaced by new growth, which extended thence up the adjacent wall of the pulmonary artery, embracing it so closely that it could not be dissected off. Several of the mediastinal glands were hard and enlarged. On examining the lungs, the left bronchus was found to be all but occluded by a mass of new growth close to its bifurcation, which was continuous with that in the walls of the auricle, and extended for a short distance into the tissues of the lung at its root. There were also a few isolated nodules of growth in the lower lobe of the lung. The masses of growth were white, hard on section, cupped slightly, and when scraped yielded a thin semi-transparent juice. On microscopical examination they were seen to consist of a large amount of fibrous tissue enclosing alveoli of various sizes. The alveoli contained many epithelial cells, some of which were distinctly columnar in form. A careful examination of every other organ of the body was made, and in none was any trace of growth found. Hence it was thought that the growth might have originated in the epithelial lining of some mucous gland in the left bronchus and have affected the heart and mediastinal glands secondarily. The case is of interest on account of the rare occurrence of the disease and the total absence of any symptoms pointing to so serious an affection of the heart and lungs.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

HYDRONEPHROSIS OF RIGHT KIDNEY; NEPHROTOMY;
PYONEPHROSIS OF LEFT KIDNEY; NEPHRECTOMY.

(Under the care of Mr. WHIPPLE.)

THE explanation of this case seems to be as follows: The girl was the subject of some congenital stricture of both ureters. The left kidney first became dilated, and eventually all its secreting tissue was completely absorbed. Whilst the left kidney was undergoing atrophy the right kidney was undergoing compensatory hypertrophy, and at the same time its pelvis and calyces were dilating. At the age of fourteen the right hydronephrosis had become apparent. Ten years later the right loin being drained and all the urine escaping from it, it became evident that the left kidney was destroyed. The patient being very anxious to get rid of the fistula, an attempt was made, by exploring the bladder and the right kidney, to find the cause of the obstruction, which at that time was unexplained. Either owing to the examination of the bladder or the palpation of the left loin, suppuration was

set up in the sac of the old hydronephrosis on the left side. For the notes of this case we are indebted to Mr. W. Gifford Nash, late house surgeon.

A. S—, aged twenty-five, a school teacher, was admitted into the South Devon Hospital on Nov. 18th, 1890, suffering from a renal fistula, of which she wished to be relieved. She stated that since the age of fourteen she suffered from a dragging pain in the right loin and occasional attacks of vomiting; she never had any hæmaturia or passed gravel. For many years she passed very little urine by day, but had to get up two or three times each night. On Feb. 19th, 1890, she was admitted into the West Kent General Hospital, Maidstone, where it was found that there was a large fluctuating swelling in the right loin. The circumference of the abdomen varied from thirty-two to thirty-four inches. The urine had a sp. gr. of 1010, and contained pus and phosphates. The daily quantity varied from sixty to 106 ounces, about two-thirds of this being passed by night. This ratio was maintained whether she got up or remained in bed all day. Under chloroform no urine could be squeezed from the tumour into the bladder. Nephrotomy was performed and 100 ounces of alkaline fluid containing pus, sp. gr. 1012, evacuated. A urinary fistula has remained since then.

On admission the patient was a florid and well-nourished woman, with a urinary fistula in the right loin just above the iliac crest. In the right loin and iliac region could be felt a large firm tumour. A probe passed into the fistula towards the umbilicus six inches, and upwards and downwards four inches each. No kidney could be felt on the left side. During the first week in hospital the urine from the loin averaged fifty ounces, but none came from the bladder. On Nov. 26th chloroform was given and the bladder examined digitally, but nothing abnormal was detected. The renal tumour was explored through the fistula, and the dilated kidney pelvis examined. The upper opening of the ureter could not be found. On Dec. 16th the patient had a rigor and aching in the left loin; next day two ounces of purulent fluid came away from the bladder. The signs of suppuration continued until operation. On Dec. 24th a swelling was first felt in the position of the left kidney, and on the 27th a pyonephrosis was opened in the left loin, and thirty-one ounces of pus evacuated. The sac was well washed out, and its edges stitched to the skin. After this there was no discharge of pus from the bladder, and the wound in the left loin rapidly contracted. On Feb. 13th, 1891, the wound in the left loin was enlarged, and the pyonephrotic sac peeled off the surrounding tissues, and as much as possible removed. The sac extended high up under the ribs, so that its upper part could not be got at. Nothing was seen of the remains of ureter or renal vessels. On July 24th, as there was still some discharge from a sinus running up under the ribs, chloroform was given and the cavity scraped out. A few days later there was a discharge of pus from the wound resembling softened spleen. This lasted three or four days, and then the discharge gradually diminished, so that when the patient left the hospital at the beginning of October there was only a small sinus remaining. The urine from the right loin contained about one-twelfth albumen, and was collected in a Maw's urinal.

Remarks by Mr. W. GIFFORD NASH.—The points in favour of the obstruction being a congenital stricture of both ureters, either at their origin from the pelvis of the kidney or at their entrance into the bladder, are the facts—(1) That the majority of hydronephroses in children are due to congenital narrowing at one or other of the spots mentioned, as shown by the examination of museum specimens; (2) the absence of any urethral obstruction or tumour of the bladder blocking the urethra, or involving the apertures of the ureters; (3) the absence of any history or signs of a previous attack of pelvic cellulitis; (4) the absence of any pelvic tumour; (5) the absence of history of renal calculi, or any other known cause of hydronephrosis. The other points of interest in the case are: (a) The increased flow of urine by night, which cannot be explained on mechanical grounds, as it occurred if the patient was up all day, or if kept in bed. (b) The large quantity and low specific gravity of the urine and albuminuria are no doubt due to the chronic interstitial nephritis which accompanies the hydronephrosis. (c) The escape of splenic pus, which is easily explained by the fact that the spleen is in contact with the left kidney. (d) The fact that the absence of the left kidney could not have been diagnosed, so that if the hydronephrotic kidney