

could not be distinguished below, probably owing to the thickness of the pleura. The costal pleura was removed with the lung, and its outer and posterior surface was marked by ridges corresponding to the intercostal spaces. There were no adhesions on the right side, but eight ounces of fluid. The pericardium was normal. The heart weighed 18 oz.; the right cavities were distended with mixed clot and fluid blood. The muscular tissue was marked by pale yellow fatty striæ; the valves were normal; the left auricle was not dilated; the mitral valve was slightly contracted at its free edge, near which, on the anterior cusp, were some fine fibrinous vegetations, which also occurred around some of the chordæ tendinæ near their insertion in the valve. Two aneurysms existed in this cusp: one three-sixteenths of an inch from the free edge had a perforation, one on each side, and a very small sac; the other higher up, a little above the centre of the cusp, projected on the auricular aspect in the form of a sac, the size of a pea, surmounted by a small diverticulum. On the ventricular aspect of the cusp the ulcerated mouths of these aneurysms were to be seen, the larger having smooth and rounded margins. Above and below this the valve was covered with a layer of minute vegetations as well as erosions, excited apparently by friction of the aortic vegetations, for the aortic valve was much diseased. Its middle cusp was in great part concealed by a warty mass of vegetations, embedded in which were concretions of lime salts; the right coronary cusp was much reduced in size, its free margin deeply eroded and ragged; the left cusp retained the normal shape, but was opaque and infiltrated with calcareous matter near its attachment; two or three small vegetations also occurred on this cusp. Beyond some atheroma around the orifices of the coronary arteries, the aorta presented a perfectly natural appearance. The mitral valve was probably competent; the aortic allowed regurgitation. The left ventricle was moderately hypertrophied and considerably dilated; the muscular tissue measured seven-eighths of an inch at the base and three-sixteenths of an inch at the apex; it was firm and dense, but through the somewhat thickened endocardium yellow fatty striæ were seen in the muscular tissue. Lungs: the trachea and bronchi contained frothy mucus; there was a caseous nodule at the apex of the left lung, surrounded by some fibrous changes; the lower lobe was partially collapsed, its tissue condensed and rather œdematous. The right lung was œdematous in the lower lobes, but crepitant. The liver weighed 62 ounces, had a nutmeg aspect on section, and was much indurated. The spleen weighed ten ounces and three-quarters, was firmly adherent to the under surface of the diaphragm, which had been fixed in the position of expiration by the pleuritic changes. In the spleen there were three old cicatrices along the anterior margin, remains of old infarctions. All were in process of contraction, their caseous contents dwindling, one surrounded by a zone of congestion. On the posterior surface of the right kidney there was a large puckered cicatricial-looking patch, where the renal tissue had been completely destroyed by an infarction, which had undergone absorption; the cortex was swollen. The cortex of the left kidney was much swollen, and of a pale buff tint, the surface studded with fine hæmorrhages."

The discovery of the miliary granulations in the least adherent portion of the pleural membrane proved the tubercular character of the pleurisy, a character which, had the thickening and adhesion been carried as far as the upper as it was at the lower part of the sac, might have been entirely missed; and the inference based on the clinical course of the case been incapable of proof. The case, then, gains much in interest in being an example of tubercular pleurisy with effusion; and the source of the tuberculosis lay in the caseous focus at the apex of the lung, a relic probably of the attack which befell him in boyhood. The case, then, does not bear out the statements of some writers that tubercular pleurisy is invariably a *pleuritis sicca*, nor that of others that if there be effusion it is sanguinolent. I have had one other case of large serous pleurisy which proved to be tubercular, paracentesis being performed, and with much benefit, but without complete restoration. The patient died in an epileptoid seizure about two months after the tapping, and pleural as well as pulmonary tuberculosis was found.

The cardiac lesions were, as suspected, mainly upon the aortic valve, the cusp of which was so much disorganised that no question can be raised as to the murmurs described being generated at this orifice. The fact, noted more than once, that the diastolic bruit was better heard over the sternum and to the left of it than over the aortic cartilage

is a common experience; but the sharp second sound that was audible at the latter spot must have been the pulmonary, for no second sound could possibly be produced by cusps like these. Whether the apex systolic bruit was really due to mitral regurgitation or not I cannot say. Certainly, the absence of any auricular dilatation shows that if the mitral valve were incompetent, it could only have been so for a very short period. The precise character of the aortic endocarditis in this case, and the manner in which the mitral cusp has become involved, are also points to be considered. The large mass of vegetations and the ragged condition of the aortic cusp, the vegetations spreading over the surface of the mitral valve and the ulceration that had taken place, show that the inflammation was still in progress, or, what is more likely, that it had been lighted up afresh; for the changes in spleen and kidney pointed to the occurrence of embolism at a date long prior to the present illness, and enable us to affirm the long duration of the aortic mischief, which the calcareous deposit in the valves also does. Far more recent, however, has been the ulcerative change on the one aortic cusp and on the mitral, which, destroying the ventricular part of the curtain at one or two spots, had led to the small aneurysmal patches which projected upwards from the valve into the auricle, and the perforation of one of which must have caused a minute current of blood to flow from one chamber to the other. (Did this suffice to produce the "mitral" bruit?) The exciting cause of this spreading inflammation on the mitral valve was in all probability the friction of the long, semi-calcified mass of aortic vegetations, as these swayed back with the regurgitant eddy through the aortic orifice. The fatty degeneration of the ventricular wall, together with the aortic disease, sufficiently explain the sudden death.

I have ventured to bring forward this case—1st, because of the occurrence of a large pleuritic effusion in cardiac disease; 2ndly, because of the tubercular nature of the pleurisy; and 3rdly, because of the character of the endocarditis. How far the lowered state of health of the man may have aided in rekindling the endocardial inflammation, and that a link may in this way be established between the two conditions, is an open question. Otherwise it seems to me that we have here in one subject an unusual combination of two uncommon conditions, each of which is by itself a necessarily fatal disorder.

## OBSTRUCTION OF THE ŒSOPHAGUS TREATED BY GASTROSTOMY.

BY CHARLES N. MACNAMARA, F.R.C.S. ENG.

J. E—, a tailoress, aged fifty-one, married, was admitted into the Westminster Hospital on May 5th, 1884, under the care of Dr. Donkin. She stated that she had been quite unable to swallow anything for the previous three weeks; that she had constant pain, though not severe, in the chest, and that she had lost much flesh. The patient had had no serious illness. She had been pregnant five times, with two miscarriages. Many years ago she had a rash on the skin and sore-throat, with considerable loss of hair. The family history was good, giving no evidence of hereditary disease. Thirteen months ago she first noticed some difficulty in swallowing solid food, and about six months ago the difficulty seemed to become suddenly worse, so that it cost much effort and pain to swallow anything solid, and vomiting followed in about ten minutes after doing so. The dysphagia increasing, all attempts at taking solid food were relinquished, and only liquids were taken. Three weeks ago, however, even liquids were returned almost immediately. She was then admitted into a hospital where she had been attending for six months as an out-patient, and was fed with nutrient enemata.

On admission into Westminster Hospital the patient was seen to be extremely emaciated, with a somewhat sallow skin. She complained of pain behind the lower part of the sternum, and of great thirst; there was some tenderness on deep pressure over the supra-sternal notch. No tumour could be felt in the neck, or in any part of the body. The heart sounds were clear, but weak. There was no dyspnoea, nor any alteration of voice. The lung resonance was good. On deep inspiration the breath sounds were heard much less loudly over the right side of the back than over the left.

On examination the abdomen appeared to be normal; numerous hard masses were felt at first, but these disappeared after an enema. (Esophageal bougies were passed, but all stopped at a point about twelve or thirteen inches below the teeth; a small-sized one (No. 6) passed no further than a large one; the passage caused a little pain. About three hours afterwards she brought up some pultaceous material, undigested, without acid reaction. Nutrient enemata were given every three hours, and were well retained. Any liquid given by the mouth was at once returned.

On May 9th, with a view to probable gastrotomy, Mr. Macnamara was called in consultation. He failed to pass the smallest instrument through the obstruction, and, as some bloody mucus was attached to the end of the bougie on its withdrawal, he thought it undesirable to make any further attempts to reach the stomach, and strongly advised the operation of gastrotomy, as the patient was rapidly failing.

At 1.30 P.M. on May 14th, the patient being anaesthetised, Mr. Macnamara commenced the operation. As carbolic spray had been employed in the room for two hours previous to the operation, and all the instruments &c. were soaked in carbolic solution, no other antiseptic precautions were taken. A curved incision, about three inches long, having its convexity towards the middle line, was made parallel to and on the inner border of the left costal cartilages, beginning about an inch and a half below the ensiform cartilage. After the bleeding had been arrested, the peritoneal cavity was opened by a cut as long as the skin incision. Portions of large intestine and omentum at once protruded and were returned, and Mr. Macnamara had to enlarge the incision upwards about three-fourths of an inch, exposing the left lobe of the liver. The anterior surface of the stomach was now seen under and to the left of the liver, and a fold of it was drawn through the wound by dressing forceps tipped with rubber. This fold of the anterior wall of the stomach was then transfixed by a needle loaded with stout silver wire; the needle was then passed through a piece of the skin on the thorax, and the wire was there twisted and fastened. The edges of the abdominal wound were then brought together round the protruding portion of the stomach by silk sutures passed through the whole thickness of the wall and peritoneum. At no point was the stomach stitched to the edges of the wound, but the wire suture held it in its place, the piece of stomach protruding through the walls of the abdomen being about the size of the half shell of a walnut. Mr. Macnamara then thought that the wire stitch might cut through and the stomach fall back into the abdomen; so he transfixed the protruding part with a harelip pin placed transversely, so that it rested on the abdominal wall on either side of the wound. Thus all traction was taken off the silver wire, which might then have been removed, but to make quite safe this was not done. The wound was dressed with vaseline spread on lint, two large Gamgee pads covering this. This form of dressing was continued until the patient recovered and all dressing was dispensed with.

On May 15th the patient complained of much pain in the stomach and intense thirst; tongue furred and dry. Pulse 64; temperature 98°. The wound was cleaned and dressed. Nutrient enemata were given every four hours, with twenty minims of tincture of opium in the last one at night; she slept fairly well. On the 17th the wire stitch was removed; the wound looked very healthy and was uniting well. Pulse 65; temperature 98°. The patient still complained of much pain in the abdomen, which was tender; no tympanites. A simple enema was ordered, which acted copiously and gave much relief. At 1 P.M. on the 21st, the seventh day after the operation, Mr. Macnamara made a small opening in the protruding portion of the stomach with a Graefe's cataract knife; the incision was only just large enough to allow the introduction of a No. 8 gum and silk catheter. Through this were injected one ounce and a half of beef-tea and a teaspoonful of brandy. At 6.45 P.M. four ounces of beef-tea and three drachms of brandy were injected; the patient then said she felt full and satisfied. Temperature normal. On the 22nd the patient looked rather jaundiced; urine high coloured. A simple enema was ordered, and this relieved her discomfort. On the 22nd four injections of four ounces each and four of nutrient enemata were given alternately, and this plan of feeding was adhered to for six days. Temperature normal. The enemata were gradually discontinued, and the patient tried to swallow a little fluid by the mouth to relieve her great thirst, but was unable to do so. On the 29th she had her last nutrient enema of milk and egg. She could now swallow a very small quantity slowly.

The harelip pin was withdrawn a fortnight after the first operation, and the stomach receded considerably during the next few days, till it was below the level of the abdominal wall. The food administered by the stomach consisted of milk and egg, beef-tea, Carnrick's peptonoids, and arrowroot; these generally in succession every four hours, about four ounces at a time. If more were given at a time, the patient complained of feeling overfull and uncomfortable. Benger's liquor pepticus was mixed with the food during the first fortnight. The temperature never rose above normal, nor the pulse over 70°.

From June 14th the patient rose at 11 o'clock every morning and sat up all day, dressed in her ordinary clothes.—21st: Up to this time the patient had, since May 22nd, been able to swallow a little fluid, but no solid food. She was now, however, totally unable to take food by the mouth; if she attempted to swallow the fluid caused pain, and was almost immediately returned. The patient was up and about; she had gained flesh, and had no trouble whatever in injecting food into the stomach through the opening in the abdominal walls.

The above details from the date of the operation have been drawn up by Mr. Herbert Pulling, house-surgeon at Westminster Hospital, to whose great care and judgment the satisfactory termination of the case is largely due.

## CONGENITAL CONTRACTION OF ORIFICE OF PULMONARY ARTERY FROM FUSION OF THE VALVES; FORAMEN OVALE OPEN.

SEQUEL TO "A CASE OF EXTREME CYANOSIS IN AN ADULT."<sup>1</sup>

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A CYANOTIC woman, aged twenty-one years, was exhibited at the Manchester Medical Society, Oct. 4th, 1882; and details of her condition are given in THE LANCET of the date mentioned, of which the following are the more important:—

Mary F— had good health till between eighteen and nineteen, when, after hurrying a good deal, she had pains in the chest and back and a choking sensation, and was told that "she was as blue as a whinberry." After a temporary disappearance or abatement of the blueness it returned and persisted. The chest wall was unduly prominent opposite the second, third, and fourth left rib cartilages. "The jugular veins are not distended, but there is distinct pulsation of the carotid arteries. The heart's impulse is diffused and heaving; it is felt in the third, fourth, and fifth spaces, as far out as the anterior border of the left axilla, but is not felt near the sternum, nor is there any epigastric pulsation. The maximum point of the impulse is in the fifth space in the nipple-line; no thrill. The cardiac dulness is much increased, and laterally rather than vertically, extending from about one inch to the right of the sternum to almost the middle of the left axilla; the third rib marks the upper limit of superficial dulness, though the first two spaces are higher pitched than those on the right side; the sixth rib is the lower limit. On auscultation a high-pitched, systolic, whistling murmur is heard at the base, of maximum intensity over the first piece of the sternum; it is well conducted down this bone, being also well heard at the right sterno-clavicular articulation, and faintly in the carotids. A vertical line from the middle of the left clavicle marks its extreme left limit, and the murmur is gradually lost as the stethoscope is moved towards the apex; it is not heard behind; the sounds at the left apex are quite pure. The second sound is accentuated over the pulmonary cartilage, and is louder than at the aortic cartilage. The pulse is regular in rhythm, but not quite regular in force; it is equal on the two sides, and is felt in the femorals and in other arteries."

The patient was seen again in February, 1883, when she stated that she had had attacks of fainting for about a month, and that the pain in her chest was worse; it was noted that the cyanosis had increased, and that the systolic basic murmur was not so loud as formerly, but the heart in other respects was unaltered. The chest pains and difficulty in breath-

<sup>1</sup> Reported in THE LANCET, 1882, vol. ii., p. 801.