Sydenham Society, says: "The jaundice from mental emotion is developed much more rapidly than is even the case in complete closure of the ductus choledochus." He assigns two causes which may produce this effect—"1, by interruptions of the circulation of the blood through the liver, by the influence exerted by the nerves upon the calibre of the portal vein; or, 2, by interruptions to the heart's action, the respiratory and the renal circulation."

Now undoubtedly, if mental emotion of a depressing character, acting thus on the circulation, can produce jaundice—a fact, I think, sufficiently established—it does not appear at all improbable that great losses of blood, producing as they do weakness, irregularity, and obstructed circulation, should lead to the same result.

Again, there are many cases of jaundice recorded resulting from snake bite and pyæmia. Whether they depend on deranged innervation, affecting the circulation through the liver and great vessels, or whether from a change in the condition of the blood, we have not sufficient data to determine. My own opinion is, that the phenomena I observed were due to congestion of the liver, just at that period when reaction had set in. What is really the effect on the circulation of profuse hæmorrhage? I do not mean the immediate effect in those cases where death occurs directly after excessive bleeding. We then find all the venous and arterial cavities empty; but this is not the case shortly afterwards, if the patient should survive. Rapid absorption of watery fluid takes place. It is increased in its proportions even during the abstraction from an artery or vein. Thus Dr. Zimmerman (vol. iv, p. 389) found, in bleeding dogs, that the last drawn portion of the blood contained 12 or 13 parts of water in 1,000 more than the blood first drawn; and Polli notices a corresponding diminution in the specific gravity of human blood during venesection, and has suggested the only possible explanation of the fact; namely, that during bleeding, the blood-vessels absorb very quickly a part of the serous fluid with which all the tissues are moistened.

Nature therefore endeavours, and partially succeeds, in restoring the volume of the circulating fluid. But I may say, in the words of the poet, "quantum mutatus ab illo." It is no longer the same highly stimulating and nutritive fluid; besides which, the weakened condition of the great vessels and cavities of the heart peculiarly favour that condition, which we here denominate passive congestion, and which Andral and the French pathologists designate asthenic or passive hyperæmia.

Now we all know that jaundice may be produced by congestion of the liver of a passive character, as well as from more active congestion arising from over-stimulation. In the former case, the jaundice may first arise in the liver where the bile is reabsorbed into the circulation. These cases I therefore regard as the result of passive congestion coming on with febrile reaction. In themselves, they only form a minute fraction of the tendency to visceral congestion induced by hæmorrhage, or any other debilitating causes, such as the long exposure to high temperature, and the consequent feebleness, the depressing passions, animal poisons, and many other causes which will immediately suggest themselves to your memory.

I think it probable that, if the records of venesection were ransacked, we should find abundant evidence of subsequent congestion, not only of the liver, but of many other viscera. The experience of every medical man teaches him that œdema is a common consequence of excessive losses of blood. This probably is owing, in some measure, to the watery condition of the blood before alluded to, but also in no insignificant degree to the atonic condition of the heart and great vessels, whether from defect of proper nutrition, or from loss of nervous energy.

There is one other theory I think it right to mention in relation to this subject. The one on which I have hitherto dwelt supposes the cases to have resulted from hepatic congestion secondarily to the change in the blood. But you are doubtless aware that many pathologists believe that the cause of jaundice should be sought in a morbid condition of the blood without any abnormal condition of the liver. Frerichs says:—"Breschet, to whom belonged the honour of having first supported the derivation of the bile-pigment from the blood by direct proofs, bluntly expressed this view as to the origin of jaundice as follows: 'Je présume ainsi que l'ictère est occasionné bien moins par la bile, que par le sang.' A similar expression is made use of by Dubreil: 'La teinte ictérique est la suite d'une modification malade des parties constituantes du sang, peut-être de la matière colorante portée sur le serum.' This theory has acquired fresh support from the investigations of Virchow upon pathological pigments. These investigations have proved that, under certain circumstances, a yellow substance is formed from the hæmatine, which, in relation to solvents and reagents, bears a close resemblance to cholepyrrhin.

"Zenker and Funke have brought forward fresh arguments in favour of the intimate relation subsisting between the bile-pigment and the red matter of the blood, by shewing that a modification of the colouring matter of the bile, viz., bifurvine, can easily be transformed into hæma-

toidine, a derivative of hæmatine. This would appear to indicate the possibility of a direct transformation of hæmatine into cholepyrrhin."

Whether the facts I have brought before you are best accounted for by the former or the latter theory, I am not in a position to decide; but of their resulting from each other I have very little doubt.

CASE OF RUPTURE OF THE HEART.*

By GEORGE MAY, JUN., ESQ.,
Surgeon to the Royal Berkshire Infirmary.

A. B., aged 61, during the night of September 23rd, was seized with acute pain in the epigastrium, extending through to the back. For two or three evenings he had complained of slight uneasiness in the chest: he attributed this to indigestion, and prescribed for himself some quinine. Soon after the pain commenced, both arms became cold up to the elbows. I saw him early in the morning, and remarked the anxious expression of his countenance and the tumultuous action of the heart, the sounds being distinct, with a frequent but feeble pulse, which never fell below 120 in a minute. The pain ceased after a few hours, and did not return. During the following night, the breathing became very hurried, with congestion of the lungs. From this time, the symptoms varied but little. He could not lie down or turn on his left side. There was increased dulness on percussion over the cardiac region. The last day or two of his life, his legs became swollen; and he died on October 11th, suddenly, seventeen days from the commencement of his illness.

POST MORTEM EXAMINATION, twenty hours after death.—The body was fat. The pericardium was filled with soft clotted blood, but no serum. The anterior wall of the lower half of the left ventricle was slightly adherent to the pericardium. The heart was moderately covered with fat, and pale; the anterior wall of the left ventricle was very thin, not thicker than cartridge-paper, and supported by a layer of partly organised deposit, which was firmly adherent to it. Near the auriculo-ventricular septum were two small openings in the anterior wall, about large enough to pass a No. 6 bougie. There were atheromatous deposits in the aorta.

I can only find one case, recorded by Dr. Quain in the *Pathological Transactions* for 1861, in which the patient survived more than a few hours; and in that case there was no distinct proof of rupture. That the illness depended on the heart, and would probably end fatally, was early diagnosed; but, as I had not heard of any case of rupture in which the patient survived more than a few hours, the true nature of the illness was not detected.

In a case of rupture of the left ventricle which I presented to the Society some years ago, death occurred within one hour.

In early life, my patient had lost his sight from small-pox, and for the last few months had ceased to take exercise, not having left the house during that time.

The case seems to have been one of aneurism of the left ventricle, associated with fibroid degeneration. The thinning of the wall of the ventricle was partly remedied by a deposit of fibrine; but this, not taking place close to the mitral valve, allowed rupture to take place. The escape of blood into the pericardium caused adhesive inflammation, but did not close the aperture; and the patient existed in a condition similar to that produced by effusion of serum into the pericardium. The smallness of the aperture was the reason why he probably escaped immediate death. Until his last illness, he had never suffered from any symptoms of inflammation of the heart.

ANEURISM OF THE HEART.*

By T. L. WALFORD, Esq., Reading.

MR. G., aged 62, died October 1st, 1868, having first complained of the illness which caused his death in November 1865. He complained, when taken, of severe pain in his chest and arms. He passed an agonising night—at one time on the bed, at another on the floor, shifting his position continually, in vain attempts to get ease. All subsequent attacks came on in a similar manner. He was needy in circumstances, but inactive in disposition, and was strictly temperate.

The symptoms generally present were: shortness of breath, which was easily disturbed; pain in the chest; oppression; and inability to lie. Of the sounds of the heart, only one was observed at the apex; a slight *bruit* was believed to be heard at a distance. The least exertion made him pant as if he had been running. The pulse was quick, 100, without firmness. Such was the record in January 1866.

* Read before the Reading Pathological Society.

In March 1866, he was seen with Dr. Cowan; and the diagnosis at that visit was enlargement of the left ventricle. It was a question whether there was not some narrowing of the aortic orifice, though no sound was heard—only one sound at the apex. Some iron, with an aperient pill and some antispasmodic, were prescribed for him.

In May 1868, he was seen again in conjunction with Dr. Cowan. The note then made was, "Enlargement of the left ventricle; some obstruction, probably narrowing of the arch of the aorta; some regurgitation, as evidenced by a moist state of the tubes at the base of the lungs." He was ordered tincture of perchloride of iron, with tincture of digitalis; and a sedative when required.

In August, there was a congested condition of the right base of the chest. His legs, which had been cedematous since April, increased much in size; and his breathing became so short, and so aggravated by the slightest movement, that he could not lie. An incision was made on the inner side of the leg, most swollen, with great relief, so that he could lie again. In this way the time was passed until October 1st, when, at 3 P.M., he suddenly expired.

On October 2nd, a *post mortem* examination was made. The heart was larger than normal; and on the wall of the left ventricle was bulging, of the size of a wineglass in diameter. On examining it from within, it was found to be filled with coagulated fibrine, constituting chronic aneurism of the heart—a specimen, at once beautiful and complete, of a secondary heart-disease.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

REPORT ON THE TREATMENT OF DELIRIUM TREMENS.

It is interesting to note in the following report, which gives a fair idea of the state of opinion in the profession on the subject, the great change which has taken place within the last few years in the treatment of delirium tremens. Instead of the heroic doses of opium, which were almost as a matter of course given in cases of this disease, opium is now used only by some physicians, and by them in comparatively small doses; the excessive treatment by alcohol has given way to more moderate measures, and now it is given up altogether, or stimulants are administered in much smaller quantities, while judicious nursing, except on rare occasions, has taken the place of the strait jacket. It is satisfactory to find that all are agreed as to the great importance of abundant nourishment of the best kind, and perfect rest.

CHARING CROSS HOSPITAL.—Dr. Salter's treatment is sedative, pushed to extremity, aided by stimulants, and, above all things, *feeding*. The results which he has obtained have been uniformly such as, in his opinion, leave nothing to be desired.

MIDDLESEX HOSPITAL.—Dr. Goodfellow is not inclined, during the early part of the disease, to interfere greatly. His treatment is mainly expectant and dietetic, abundance of nourishing food being allowed. Should the urgent symptoms, however, continue, subcutaneous injections of morphia, from a fourth of a grain upwards, according to circumstances, are given; and stimulants, spirits, or beer, as the case may be. The following mixture Dr. Goodfellow has found frequently of great service.

R Quinæ disulphatis gr. ij; chloroformi ℥xx; tincturæ cardamomi comp. 3j. To be taken in water every four or six hours.

If there be much febrile disturbance, a grain of opium with a grain of calomel is prescribed.

Dr. Murchison advocates no special rule, his mode of treatment depending upon the individual character of the case. Generally speaking, however, he employs opium if there be no real affection, but if this be present, he believes tincture of digitalis, in twenty or thirty minim doses, offers considerable advantages. He thinks stimulants in some cases useful, but he by no means employs them in all cases. Nourishing food and quiet are, however, invariably necessary.

ST. BARTHOLOMEW'S HOSPITAL.—Dr. Farre always takes care to get the bowels open at first. He then gives opium; or, if the pupils have any disposition to contract, opium and antimony several times a day. If sleep be not induced by this means, he uses cold affusion to the head. Wine or beer is allowed, if the pulse be low, or the skin perspiring. He has given half-ounce doses of digitalis in several cases without injury, but without marked benefit.

ST. THOMAS'S HOSPITAL.—Dr. Peacock has been lately employing bromide of ammonium in delirium tremens with very good results.

WESTMINSTER HOSPITAL.—The plan of treatment which, as a rule, Dr. Fincham adopts, is as follows. He cuts off at once all alcoholic stimulants, and administers directly abundance of easily digested and nourishing food—*e.g.*, three pints of strong beef-tea, and one of arrow-root and milk, given in divided quantities every two hours, as in a case of fever. If, by giving one or two pints of porter in the day, he can get food taken more readily, Dr. Fincham allows that quantity. As soon as possible, he urges the patient to take solid food, in the shape of meat, given as regular meals, with porter; continuing, at the same time, beef-tea, etc., in less quantity. Dr. Fincham gives no opium. If, at the commencement of treatment, the patient appear much exhausted, he gives ammonia; but, as a rule, prefers to give, as medicine, hydrochloric acid in some bitter infusion, in order to increase the appetite and assist digestion. If the patient have been drinking hard up to the time of his coming under treatment, Dr. Fincham has found, on several occasions, great and rapid improvement take place after the action of a brisk purgative—*e.g.*, calomel and colocynth, or a drop or two of croton-oil. This must, of course, be followed by the due administration of nutritious food, etc.—Dr. Basham thinks that the treatment of delirium tremens cannot easily be reduced to a plan, as each case must be regarded as a separate study. The effect of fermented stimulants on the nervous system, when acting as a poison, although manifesting for the most part a series of morbid phenomena common to all, nevertheless require a marked modification of treatment in different individuals. Thus total absence of sleep, hallucinations more or less of one type, an excitable restless manner, complete loss of appetite or power to take or digest solid food, and very depraved alvine excretions, are the common typical symptoms of that disorder of the nervous system known as delirium tremens. The great object of remedial treatment is to allay or calm the excitable but exhausted nerve-force. Sleep and rest are the points aimed at. But sleep will not follow the use of any one known agent. There are peculiarities, whether of the nervous system itself in each individual, or of the relation of the nerve-force to the other functions of the organism, which must ever shut out the idea of one remedy or one plan of treatment being entirely effective. It has ever appeared to Dr. Basham characteristic of a limited experience, to expect or to hold out the hope that any one special remedy will be universally applicable in this disease. Opium, digitalis, antimony, have their advocates; and, doubtless, occasional successful results follow their use in particular cases. Of these, opium perhaps has been most largely used—in many cases with great advantage. It often quickly procures sleep; and, with that result once obtained, the paroxysm may almost be pronounced to be at an end. But it is only in a certain class of cases that opium is thus immediately beneficial. Take a case of delirium tremens accompanied by a good deal of vascular meningeal excitement; hallucinations of the usual type; hideous images; mental aberration; irritable, excitable manner; nights without sleep; heat of scalp; suffused conjunctiva, and pupils contracted; a sharp, quick, hard pulse. Give such a patient opium, and it will either poison him or bring on a deep comatose condition of great hazard; or, if the quantity given does not act thus, it adds to the excitement, and aggravates the symptoms to a pitch little short of those of arachnitis. Now if, with proper discrimination, some ten, dozen, or eighteen leeches had been applied to the scalp, followed by a brisk calomel purge, and then a moderate dose of opium, a grain or twenty minims of Battley, probably a different and more favourable result will follow. The chief aim in the treatment of delirium tremens is to allay the present paroxysm and obtain sleep; and the best remedy to secure this can only be found by a careful estimate of the idiosyncrasies of the individual, and of the presence or absence of morbid complications in other organs or functions beyond those of the nervous system.

NETLEY HOSPITAL.—The system on which Dr. Maclean goes in the treatment of delirium tremens is, first to secure perfect quiet and seclusion for the patient, placing him under the care of careful and trustworthy attendants, who are instructed to use every means to calm and reassure the sufferer. The dangerous practice of forcing sleep by opiates he never under any circumstances follows; nor does he allow the blood of a patient already poisoned by alcohol to be still further charged by the use of stimulants. Instead of this, he insists on the administration of strong beef-tea at short intervals, to which Cayenne pepper has been freely added. Without the addition of pepper, the stomach will rarely retain the nourishment. Food is absolutely necessary. A man who has been drinking to such an extent as to bring on this formidable affection, has, nine times out of ten, been eating little or nothing. Dr. Maclean is a great advocate for a darkened room and careful nursing by judicious male attendants. Women cannot restrain patients who, in their terror at the imaginary objects of "horror" by