

struck; or, in other words, in those parts of the nervous centres which were in contact with the anterior bony boundaries of the anterior, middle, and posterior fossæ of the skull severally; and the portio dura is so situated within the skull as, perhaps, to be more amenable to damage under these circumstances than any other cerebral nerve. The failure to discover any pathological change does not, of course, prove that no damage had been sustained.

Further, I do not think it need be assumed from the conditions found in this case that the double facial palsy observed in the first case was not due to fracture across the base of the skull, though they prove clearly enough that a blow on the head may cause such paralysis apart from fracture. But the chief interest of the case, after all, lay elsewhere—namely, in the presence of the group of non-paralytic clinical phenomena, to which nothing similar existed in the first case, and in their explanation. What caused the patient's irritable apathy and apparent enfeeblement of mind? What caused his persistent mental misery? What caused his progressive and rapid emaciation and muscular enfeeblement? To these questions, I am sorry to say, I can give no satisfactory answer. All the perceptible damage to the surface of the brain was well removed from the generally recognised motor and sensory areas; a fact which goes to explain the absence of cerebral paralysis and of impairment of the special sensory functions. Cases have been adduced to show that disease of the front part of the anterior cerebral lobes involves a profound alteration of the moral character of the patient and enfeeblement of his intellect. On the other hand, many cases of injury of this part have been met with in which no special symptoms of importance have ensued. "Dr. Crichton Brown, however" (I quote from Ross), "has drawn attention to the fact that during the early stage of general paralysis of the insane, when the convolutions of the frontal lobe are particularly apt to manifest degenerative changes, the characteristic symptoms consist of 'general restlessness and unsteadiness of mind, with impairment of attention, alternating with *apathy* and *drowsiness*.'" These symptoms are identical with some of the special symptoms presented by my own patient; and on the whole, perhaps, are such as in the present state of our knowledge might be thought likely to follow on such lesions as were found. The gradual wasting and debility, and the rectal trouble, however, seem to me at present inexplicable.

I may add that in the tenth volume of the Pathological Transactions I recorded a case pathologically identical with this; but in which the only history obtainable was that the man had been earning his livelihood subsequent to the accident (of which there was no record) which caused the superficial cerebral hæmorrhage; and that after a bout of drinking he was attacked with epileptiform convulsions, of which he died.

FIBRINOUS COAGULA IN THE HEART AND PULMONARY ARTERY.

By SIR JOSEPH FAYRER, M.D., F.R.S.

MANY years ago, when in India, I called attention to the subject of thrombosis of the pulmonary artery, and the formation of decolourised fibrinous clots in the right cavities of the heart, extending into the ramifications of the pulmonary artery, as a cause of death after surgical operations and injuries, and also during the course of blood-poisoning and certain forms of disease. My views and experience of this subject are detailed in a work entitled "Pathological Observations in India," and I now revert to it as a subject which merits more consideration than it has hitherto received and is entitled to, as a serious and often fatal complication of cases, which otherwise might have terminated more favourably.

These decolourised fibrinous clots in the heart and pulmonary arteries have been attributed either to post-mortem coagulation or, when admitted to be of ante-mortem occurrence, they have been considered as merely one of several phenomena which attend the process of dying, and not as an immediate cause of death. This, I venture to contend, is not always the case; but, on the contrary, that such clot and plugging of the pulmonary artery on the right centres

themselves cause death not unfrequently in cases in which without them death could not have occurred. My experience of this subject has been acquired chiefly in India; but it has been confirmed by observation in this country, and I am under the impression that this is a more frequent cause of death, not only in the course of pyæmia, septicæmia, and certain diseases, but also after surgical operations, wounds, and injuries.

A malarious climate I believe to be an especially predisposing cause, and in the state of malarial cachexia which so frequently results from residence in such countries, even where there may have been no fever, and especially in cases where anæmia is splenic or hepatic incompetency is present, it is prone to happen. But it is by no means confined to persons so affected, for I have frequently seen it in individuals who presented no cachectic appearance nor in whom was there any obvious indication of visceral disease. Obstruction of the pulmonary artery and right cavities of the heart by coagula, causing death, may thus occur in persons not cachectic from malarial influences. Still, the disease is especially liable to affect persons labouring under that impaired state of health; where the spleen is diseased it is very prone to happen and to prove rapidly fatal.

Hyperinosis, or excessive formation of fibrinous material in the blood, is the condition on which the thrombosis depends, whilst the condition which occurs in surgical fever, pyæmia, and in exhaustive diseases such as cholera, malarial fever and cachexia, diphtheria, scarlatina, puerperal and other diseases, leads to the hyperinosis. Thrombosis of the pulmonary artery kills by arresting the passage of blood through the lungs, whilst coagula in the left side of the heart and thrombosis of the arteries operate locally by causing gangrene of the part. There is, however, a strict analogy between the two forms of thrombosis; they arise from fibrinous material in the blood, and the predisposition to the formation of this is equally engendered by exposure to malarious influences, as it probably is by other diseased states.

The so-called abscesses which are so frequently found disseminated in the tissue of the liver, spleen, kidneys, lungs, and in the areolar tissue in persons who live in hot and malarial countries, are not primary abscesses, but originate in patches of parenchyma which have perished owing to the deposit of emboli in the small vessels at the spot. Around such dead patches, as around the core of a boil, pus is subsequently found, and so the local death is converted into an abscess; though in cases of blood-poisoning in India death frequently occurred before these suppurations took place, when the part was found simply as a piece of dead tissue surrounded by an areola of congestion or inflammation.

As to the mode in which the change in the blood is brought about I am ignorant, though it is not difficult to understand why it should be so when the spleen and other blood-elaborating organs are compromised. But of the fact and of its consequences I know there can be little doubt, as many cases within my own observation have convinced me. This subject has been recently attracting attention, hence these remarks, derived chiefly from experience in India, but probably applicable here.

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NOTE ON AMPUTATION.

By WM. S. SAVORY, F.R.S.,
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PERHAPS in no case is the judgment of the surgeon more severely taxed than when he is called on to decide the question of amputation in an injury to a limb. The rules of surgery on this subject are necessarily very vague, and too often they can be applied with but little force to the particular instance; for in any case, many considerations, each one largely affected by the rest, are involved. Of course when the injury is of such a nature, from the destruction of large vessels, nerves, or other important structures, that recovery is out of the question, there is no room for doubt. It is when the injury is of such degree and extent that although recovery is possible, it is yet improbable, involving very grave risks to life, that the surgeon's anxiety is raised and

his way becomes difficult. Often in these cases one man forms a decided opinion on what appear to others to be very inadequate grounds. Even when to others his conclusion appears to be sound, he may fail in explanation to set forth sufficient evidence of it. If he has really reasoned on the subject, he cannot reproduce the argument for the guidance of another. He gets no farther than, "I think upon the whole," &c. He may be right, as right as a man who can express his thoughts and explain clearly the ground of his opinion; but it must be allowed that this kind of decision is neither instructive nor satisfactory.

In endeavouring to form a judgment in such cases it seems to me that one has to consider, first of all, whether the injury is greater than any operation for its removal. If the operation would not be the means of substituting a less injury for a greater—less for more risk in the future,—it surely ought not at this time to be thought of. And deciding in favour of an operation on this ground, the question comes, Is the chance of recovery from the operation so much greater as to cover the risk from the second shock which the operation would necessarily cause? This last consideration oftentimes adds greatly to the difficulty of decision. Then further, assuming the injury not to be beyond all reasonable chance of repair, is it worth while, for the prospect of such future use in the limb that might remain to him, for a man to run, in order to preserve it, any additional risk of his life? and, if so, to what extent? With all this it has to be borne in mind that if an attempt is made to save the limb, in the event of failure there may be some chance in the future of removing it, and of still saving life. But the probability is that such secondary amputation will be forced on us under unfavourable conditions; in other words, that there will be but little choice of time.

The opinion of surgeons has of late years gradually changed respecting the comparative advantages and disadvantages of what is called primary and secondary amputation after injury. It was formerly held that less risk to life is incurred by operating immediately after an injury than at a remote period, and this view was, I believe, founded chiefly on the records of military surgery. This, however, has not been confirmed in recent years by the experience of civil practice, and I suppose that at the present time such a question would receive for the most part doubtful or contradictory answers. Does not this depend on the want of distinction which ought to be drawn between different cases of secondary amputation? When in an instance of severe injury an attempt is made to save a limb much local and some constitutional disturbance is sure to follow, and in unsuccessful cases the patient either dies directly from this, or the limb passes into a condition beyond prospect of recovery. Now, in the question of secondary amputation, if we can select our own time for the operation, when the fever or constitutional disturbance which has been provoked has subsided, and we operate to remove a useless or hopelessly damaged limb, such amputations are done, I believe, with better prospect of success than primary ones, and this chiefly because they remove a source of great and perpetual irritation with comparatively little shock. But if, while much constitutional disturbance prevails, we are called on to choose between amputation and death, we operate under most adverse circumstances and with much greater risk, no doubt, than in primary amputation.

So, then, I should answer the question thus: Secondary amputations are more favourable than primary ones when there is a choice of time—that is, when we can afford to wait till the temperature and other signs of general disturbance have subsided; but secondary are less favourable than primary amputations if the operation is forced upon us at a period of the case when a high degree of fever still prevails. Herein, too, lies the difference in the prospect between secondary amputation after injury and amputation in disease, for in the latter case there is almost always choice of time.

THE Rev. W. Hume has appealed to the Governors of the Hastings, St. Leonards, and East Sussex Infirmary to reconsider their decision to pull down the old hospital, which contains about thirty-two beds, and replace it by a new one containing 100 beds. He contends that by increasing the accommodation of the old institution to sixty or sixty-five beds the wants of the district would be fully met.

THE foundation-stone of a new hospital was laid at Rugby on the 19th ult., the founders being Mr. and Mrs. Wood of that town. The prospects of the provision of a liberal endowment are very encouraging.

ON VENESECTION.¹

By W. H. BROADBENT, M.D., F.R.C.P. LOND.,
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THE disuse of bloodletting as a remedy has so frequently been the subject of remark that observations respecting it, except by way of explanation, are unnecessary. We are often disposed to reproach ourselves when we contemplate the extreme and violent fluctuations which have taken place in the practice of medicine, both as regards the alternate employment and abandonment of particular drugs or lines of treatment, and as regards the principles of treatment generally; but while we have reason to be ashamed of the influence which mere fashion and love of novelty exercise, some of the changes which at first sight seem most inexcusable and unaccountable have really been the inevitable results of increasing knowledge and the steps of advancing science. I believe this will prove to have been the case with venesection. Bleeding was formerly employed with little discrimination; in some cases it did good, in others it must have done harm; in a still greater number it probably had no appreciable influence on the course of the disease, but did not injure the patient. The uselessness and danger of the practice were frequently shown, but doctrine or theory has with the mass of men far more influence than observation, and while the experience of one set of observers was simply set against that of another, recoveries without bleeding did not carry conviction to the minds of those who had seen recoveries after bleeding; and it was only when, by the evidence of the post-mortem room and the experimental study of inflammation and other morbid processes, a revolution in the general doctrines as to disease had been effected that the balance was turned, so that venesection was condemned and abandoned.

During some years there has been a gradual reaction. It has been shown, notably by Sir James Paget, that venesection is attended with very little risk either of immediate or remote injury, while on the other hand it is in suitable conditions a remedy of striking power. A return to indiscriminate bleeding would be a great evil, but of this there is really no danger. It is now better known what abstraction of blood can do and what it cannot. The indications for resorting to it can be more precisely defined, and sooner or later the teachings of physiology applied to the rectification of abnormal conditions present in disease will remove the stumbling-block for a time thrown in the way of this powerful therapeutic agency by morbid anatomy.

In the first place, general bleeding is not employed as a remedy for inflammation as such. We have in the writings of our predecessors a vivid description of the effects of venesection in iritis—the relief of pain, the diminution of vascularity, the arrest of destructive changes; but true as this undoubtedly is, such advantages, even were they constant, which is by no means the case, may be purchased too dearly, and there is no inflammation of an internal organ in which venesection is resorted to. Nor is it for the control of pyrexia, whether the result of a local inflammation or of one of the specific fevers. What we seek to do, and what we can effect by venesection, is to modify the distribution of the blood and the pressure within the arterial or venous system. The circumstances under which this may be required are various; some of them I shall enumerate, and, when I can do so, illustrate by recent experience of my own.

Perhaps the most simple and unmistakable indication for the necessity of reducing the blood-pressure within the arteries by bleeding is when an aneurism is giving rise to severe pain, or is threatening life by pressure upon a nerve or some important organ. I have repeatedly seen immediate and striking relief afforded by a small bleeding in the practice of the late Dr. Sibson, whose teaching and example I have followed. An opportunity occurred last year, when a patient, who had been some time under my care in St. Mary's Hospital suffering from a large aneurism of the arch of the aorta, was suddenly seized with violent dyspnoea during my visit to the wards. His face was purple and swollen, and he was evidently in agony, while it seemed as if he must die within a few minutes unless relief could be given. My resident medical officer, under my supervision, bled him to about

¹ A paper read before the Harveian Society, Feb. 1880, with slight additions.