To meet the increasing pressure of communications, eight pages were last week added to the BRITISH MEDICAL JOURNAL; and this week the JOURNAL includes also eight additional pages.

CLINICAL LECTURE

ON

THE TREATMENT OF WOUNDS.

DELIVERED AT

THE QUEEN'S HOSPITAL, BIRMINGHAM,

SESSION 1867-68.

BY SAMPSON GAMGEE, ESQ.,

Surgeon to the Hospital; Foreign Corresponding Member of the Society of Surgery of Paris; late Staff-Surgeon of the First Class.

GENTLEMEN,—It was a maxim with Antonio Scarpa—who, for varied, deep, and sound learning, stands out in the history of our art with few rivals—that a teacher of surgery should be full and erudite in his writings, plain and dogmatic in his oral teaching. The seniors amongst you know how far I have endeavoured to conform to that great master's rule; and I cheerfully admit that compliance with it now might be consistent with the high estimation in which I hold your teachers of systematic surgery. Entering for the practical study of your profession at this hospital, which has been specially authorised as a clinical school by Royal Charter, I might fairly take it for granted that, coming as you do from the lectures at the Queen's and Sydenham Colleges, you possess all the preliminary scientific information necessary to entering upon a clinical course. But I am reminded, in the first place, that you are at different stages in the educational curriculum; and that, if I assumed the elders had filled in the foundation, and proceeded upon that basis, I might be placing the juniors at a disadvantage; and, secondly, I cannot dismiss from consideration the fact that surgery is just now in a transition state. In many of the chief divisions of what is styled, with scanty philosophical accuracy, "the science of surgery", principles which recently were believed to be firmly established are once more called in question; and a good array of facts is brought together to impugn, here and there, rules of practice which men still young had fondly looked upon, as at once signs of advancement on past experience, and canons for guidance to future generations of practitioners. I cannot give you a better illustration than the *treatment of wounds*, which is, on the whole, the most important subject which will engage your attention. It was a boast of English surgery, that, holding to the principles for the arrest of hæmorrhage by ligature laid down by Paré, John Hunter and John Bell had rescued the treatment of wounds from barbarous practice, and established it on sound principles, which Liston and his *confrères* were supposed to have perfected. But the ligature has recently been attacked with a fervid eloquence and a power of argument in which Sir James Simpson has few equals. He has already made many converts, and the practice of acupressure seems gaining ground. When the metallic replaced the thread and silken suture, it seemed pretty generally agreed that a decided advantage had been gained; but Mr. Spencer Wells returned, some time since, to the old medium for the union of one of the greatest and most critical wounds inflicted in operative surgery; and he has been imitated in this particular by Dr. Thomas Keith of Edinburgh, whose recently published *Statistics of Ovariectomy* are one of the proudest records of surgical achievement, at once prudent and brilliant, captivating for its boldness, and convincing by its unanswerable success. In a long conference which I recently enjoyed with the eminent professor of surgery in the University of Padua, I learned that he too has given up the idea that metallic sutures are superior to all others for bringing together the edges of wounds; and I need adduce no further evidence to shew how much the essentially practical matter in dispute calls for endeavours to solve it.

The use of caustics, which had gradually grown less with the supposed nearer approach of surgery towards scientific perfection, has of late years received a powerful impetus, to the extent that the sponging out the recesses of a recent compound fracture has just been counselled as a method of treatment, by one of the leaders in the modern surgical

school. A practice is vaunted as scientific, which some twenty or even ten years ago would by many have been called barbarous; yet the change is said to be progress: and that by the disciples of conservative surgery. When premature death robbed the world of Robert Liston, that giant in mind and body, who loved surgery as an idyll, and practised it as a great artist, it was thought that the *beau idéal* of treating stumps just after amputation had been attained; but many of us now condemn the practice of putting a fold of wet lint between the flaps on the table, and dressing some hours later. We look upon water-dressing as not much better than a poultice; and, rather than leave the stump open to the air, it has been proposed—and I have tried the practice with singular result and much promise—of enclosing the stump in a closely fitting rubber bag, exhausting the air by a pump, and maintaining an amount of persistent compression which would have been damned by Liston, with all the impetuous gusto of his exquisite surgical discernment. Under these circumstances, it is scarcely possible for a surgical teacher to follow Scarpa's maxim, to discard erudition, and be dogmatic. The rather must he teach his pupils to look widely and earnestly for information; to discard all prejudices; neither to despise antiquated notions, nor be too enthusiastic in accepting novelties; but to pursue a strict method of philosophical inquiry, studying books and Nature, science and practice, and, above all, remembering the words which Velpeau whispered to Nélaton as his lips were quivering in death, "*Travaillons toujours.*"

The patients whom I am about to bring before you have suffered very various accidents and operations; and, at first sight, you may not see much in common between them; but, in all, the wound is a great—indeed, a fundamental—feature; and upon the manner in which it is treated, the issue of the case is in a great measure dependent.

The old man with oblique fracture of the femur at the junction of the upper and middle thirds was admitted a fortnight since, shortly after the accident. Dr. Jelly reduced the fracture, and applied a casing of damp mill-board splints, so fashioned as to fix all the joints of the limb reaching from the iliac crest to the toes. The immobilisation of the joints is only one of the influences which in such a case as this minister to the healing action; the other great agency is circular and uniform compression of the whole member. You saw how perfectly free the man was from pain when I raised the heel and suddenly let the limb drop upon the bed. Younger and more active men suffering from a similar accident, and treated on the same plan, can walk about easily on the third or fourth day; yet so perfect is the adaptation of the fragments, so impossible their movement, that cure is effected without deformity and without callus. No greater error was ever promulgated than that which Duhamel originated, and Dupuytren enforced, with such pernicious success, touching the provisional and the definitive callus in the reunion of broken bones. The provisional callus is not a physiological, but a pathological, product; not essential to healing, but evidence of the imperfect means employed by art in aid of Nature's reparatory efforts.

In his truly magnificent, though far from faultless, essay on Fractures, Mr. Percival Pott wrote: "When the broken parts have been happily and properly coaptated, and proper methods have been used to keep them constantly and steadily in such state of coaptation, the divided parts unite by the intervention of the circulating juice, just as the softer parts do, allowing a different space of time for the different texture and consistence."

The comparison here drawn between the healing of wounds, in soft parts and in bone, is physiologically and practically correct—the one condition being perfect and immovable adaptation of the divided surfaces. It is only when the fragments of a broken bone are not so steadily fixed as to render motion impossible, that a surrounding thickening becomes perceptible. Here, again, the analogy with wounds in the soft parts is strictly correct.

A compound fracture of both bones of the leg, from direct violence, occurred in the man before you; and you perceive, from the V-shaped cicatrix, what a large flap of skin was turned down in front of the solution of continuity of the tibia. I saw the patient within half an hour from the occurrence, reduced the fracture at once, and fitted the skin-flap into place, keeping it there by strips of dry lint, one of which was successively laid on the other as it became soaked with blood; softened mill-board splints, from the middle of the thigh down to embrace the foot, were the basis of the retentive apparatus; two similar splints being placed at the back from the same point above to within three inches of the heel-bone—a nicely compressing circular bandage keeping the whole firmly together. I merely starched the bandage, while applying it, in front, to keep the case together when it became necessary to cut it open. No more mischievous expression has ever gained currency than a "starched bandage" as a means of treating fractures. The starched bandage, *per se*, is utterly useless, without the softened paste-board-splints to fit into every inequality of the limb, embrace the joints

above and below the lesion, and paralyse the muscles by compressing them. I did not look at the compound fracture for twelve days after I put it up; and then the wound was all but entirely healed. Depend upon this, if you are to save compound fractures, you must reduce them to the condition of simple ones, effect reduction, close the wound, immobilise the limb, and bear in mind that, once you have done so, nicely and effectively, to meddle is to muddle.

As a wound in the soft parts of the highest moment, let me call your attention to Mary Ann Sweet, aged 20, a patient of my friend Dr. Sutherland, on whom I performed ovariectomy on July 24th. The tumour, being in great part solid, required a free incision (nearly eight inches) for its removal; the pedicle was secured in a carpenter's callipers; and the wound accurately closed with points of silver suture, a third of an inch distant from each other. The healing of the wound was most satisfactory, as it has been in every case in which I have performed ovariectomy; and there is no doubt that this great operation would be a hopeless one if we did not take measures to bring accurately together the divided edges of the abdominal wall, and exclude the air from the peritoneal cavity; the intention and the principle of practice being the same as in the case of the compound fracture just previously under notice.

In the series of events which have raised ovariectomy to the position of one of the most legitimate operations in surgery, no incident has been more remarkable, none more opposed to tradition, than the comparative impunity with which long wounds may be made in the abdominal wall. A chief reason of this impunity is, I apprehend, the fact that the imposing circumstances of the operation have made all surgeons feel the common necessity of closing the wound at once and immediately, and endeavouring to obtain reunion of the abdominal wall, according to the practice of plastic surgery, by direct adhesion, uncomplicated by supuration.

In enlightened endeavour to enforce these principles in the general practice of surgery, no one has been more persevering and successful than Jules Guérin, to whose initiative is owing M. Maisonneuve's treatment of amputations by pneumatic occlusion.

My observation of the practice in two cases which I recently saw in the Hôtel Dieu at Paris, so convinced me that the proceeding deserved further investigation, that I determined to put it to early trial. Accordingly, I adopted it in the case of —, now in Ward 5, last Wednesday, just five days ago. The woman had suffered for upwards of two years from disease of the left knee-joint, which had resisted all palliative measures. The hysterical temperament of the patient was so marked that, for some time, it masked the true nature of the disease. Having amputated just above the joint by a large front flap, after Mr. Carden's method, the vessels secured, I adapted the flap at once, and held it in position by long strips of plaster, but I used no sutures. I then slipped over the stump, nearly to the groin, a closely fitting hood of vulcanised India-rubber. The crown or dependent point of the hood was connected by a rubber tube with a closely stoppered bottle, into which another tube was accurately fitted, the latter being connected with an air-pump. A few strokes of the piston emptied the glass jar and the vulcanised rubber hood, which at once adapted itself to every point of the surface of the stump; evidently exercising a very considerable pressure. In this state, the patient was removed to bed. The stump has not been moved from the pillow on which it was first placed; and a small quantity of reddish-looking discharge is drawn into the jar every time the piston is worked—every six hours, on an average. Much less pain and discomfort than usual has been complained of; the skin is cool; and the records of temperature, pulse, and respiration concur in encouraging the belief that all is well. Meanwhile, the patient is taking solid food and malt liquor with relish. If such a method of treatment be unattended with disadvantages peculiar to it, it is almost superfluous to observe that it must be of great service in ensuring rest, resisting muscular retraction, preventing the accumulation of matter and its decomposition, and in direct measure lessening the attendant risk.

UNVACCINATED CHILDREN.—Dr. Septimus Gibbon, in his report to the Holborn vestry, says:—"My own efforts and those of the parochial surgeons would be greatly assisted if the authorities of all the schools in the district, whether public or private, national, parochial, or ragged, would insist upon previous vaccination as a qualification and condition for admission into their respective schools. It would be wise, also, if the Board of Guardians were to require every child born in the workhouse to be vaccinated before leaving it, and by way of stimulating the practice to give a special and extra fee for the operation. At present the surgeon, unlike the out-door vaccinators, is paid no special fee for the operation. The consequence is that very few of the children born in the workhouse ever get vaccinated. After leaving the house it is left to the discretion of the parents, and so in very many instances is totally neglected."

ON THE

TREATMENT OF PULMONARY CONSUMPTION.*

By J. HENRY BENNET, M.D.

MY principal motive in writing this paper has been to bring the treatment of pulmonary consumption before the British Medical Association, for the purpose of discussion. The subject is a momentous one, involves many important scientific and practical questions, has a direct bearing on the pathological doctrines and tendencies of the present day, and is, in every respect, worthy of consideration and discussion at the hands of the eminent practitioners who are this year present in the capital of the sister kingdom. I may also add, in passing, that many of our medical brethren who adorn the profession in Ireland have acquired a world-wide reputation by their researches in thoracic pathology, none more so than our illustrious President, and that this meeting will afford us a valuable opportunity of eliciting the expression of their present views with reference to this important therapeutical question.

The subject of phthisis is so vast in itself, in its pathological affinities and connexions, that it would require not one but twenty meetings to discuss it in all its bearings. I shall, therefore, omit all allusion to the nature and origin of tubercle, and confine myself to the consideration of treatment, merely prefacing what I have to say by a few brief remarks on the general pathology of pulmonary tubercle, as a basis for the therapeutical opinions subsequently developed.

The deposit of tubercle in the animal economy, in the lungs, or in any other organ or tissue, whatever the views entertained of its intimate nature and origin, is generally considered to be a result of defective nutrition, itself the result of a lowered state of vitality, hereditary or acquired. It is a sign of defective vital energy, of vital decay, and the forerunner of eventual death; in a word it is a mode of dying. Taking a philosophical view of the disease, I do not consider tubercularisation to be a dire pestilence, an inexplicable scourge of the human race, as it is often represented. On the contrary, I look upon it as one of the means by which Providence purifies the human race, weeds it of effete organisations incapable of propagating it in its integrity, and thus secures its perpetuation in conditions of health, strength, and beauty. Were those who marry too young or too old, broken down by constitutional diseases, or worn down by sorrow, by bad air, by the struggles, the superhuman labours, the anxieties of city life—were such persons to have the power to generate children with the germ of continued life in them, mankind would soon become a race of pigmies, of dwarfs, of misshapen abortions; but they have not that power, their children mostly die young, of scrofulous and kindred diseases, or, if they reach puberty, of pulmonary consumption. Thus are the errors of the fathers visited on the children to the third and fourth generation, according to the divine law, and thus is the integrity, the sanctity, of the human race redeemed from our mistakes by an all-wise hand. The preservation of the human race from generation to generation, in its integrity, is the grand object of Providence, and in comparison with this grand object the prolongation of individual life is clearly of little value. Such considerations show how vain is repining, is rebellion, when we ourselves come under the operation of these great laws of our being. We might as well rebel against the north wind, or the south wind, blowing each in their due season. We may endeavour to protect ourselves individually from the wind that cuts us, but if we fail we must bow to a higher will, and submit to what is right and just in itself, and good for the human ocean in which we only represent one drop of water.

The attention of thinkers has been much directed of late years, by Mr. Darwin's luminous researches, to the struggle for life which pervades animated nature. This struggle is carried to such an extent amongst the undomesticated members of the animal kingdom, from the lion of the forest to the minute beings revealed by the microscope, that only the young and the strong survive. The weak, the diseased, the old, either die because they cannot secure the means of existence, or are at once exterminated by their natural enemies. Thus their races are propagated only by the young and the strong, for none other are allowed to exist. But with man it is different; he has intellect, can and does provide for sickness and old age, and thus throws the shield of his mental strength over his weak and sickly progeny. In civilised life, therefore, all are not young and healthy. Society is full of effete organisations, artificially prolonged. They have desires, passions, like their stronger brethren; like them they marry, are given in marriage, bear children, cherish and provide for them, although their offspring may be feeble and diseased. The laws of Providence, however, laws severe in their individual appli-

* Read in the Medical Section at the Annual Meeting of the British Medical Association in Dublin, August 1867.