BRITISH MEDICAL JOURNAL:

BEING THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

EDITED FOR THE ASSOCIATION BY ERNEST HART.

LONDON: SATURDAY, JANUARY 7, 1882.

AN ADDRESS ON THE SURGICAL AIDS TO MEDICINE.*

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GENTLEMEN,—As I rise to address you this evening, I know not which is the stronger feeling in me—the pleasure—the honest pleasure I may frankly avow in the distinction your invitation confers upon me, or the diffidence which tells me I am unworthy of the duty to which I am called. Your kindness gives me courage to believe that I shall at least have gentle judges.

The subject of an address like the present should, I venture to say, be a practical one. It should come home to every man's experience, and concern itself with every man's craft. To deal more widely with things, to take views of them so lofty that the details of our daily work recede into the distance is more proper in essays written for the student. These can be tested by no ready touchstone, but will be judged by time and longer labour. For this reason I have chosen a subject to-night upon which each one of my hearers can be the instant critic, and which deals with the details of our common practice. By the title *Surgical Aids to Medicine*, given to my paper, I wish to signify the relation of help which the surgeon can give to the physician, and to speak of those maladies which, though belonging to the sphere of the physician need the hand of the surgeon for their adequate treatment.

It has been too hastily said that specialism has been the bane of modern medicine, and that the divergent paths of our closer researches have led us away from those comprehensive views of our art which alone can give us mastery as practitioners.

If this assertion be made as a due warning against quackery, or as a paradoxical way of impressing upon us that analysis alone without synthesis may be profitless, then, accepting it at its true value, we may take it at its worth. But I fear the charge against specialism means more than this—is no mere denunciation of selfishness, of pettiness, or of strenuous trifling, but is aimed against subdivision of labour as a mode of progress. I scarcely need combat such an opinion as this, nor seek to show you that, without the devotion of gifted men to narrow fields of investigation, the science which inspires our art cannot prosper. Whither they have preceded we must follow, and with them seek to embody their new gains with the old. Not only must this be true of the remoter deviations of medical inquiry, but it is true also of the larger contingents of our art. That any one part of medicine can fail to depend upon, and to interoscute with the rest, is of course impossible; but on the other hand, in respect of our limited faculties, we must do provisionally and artificially what nature does not do—if we are to grasp firmly, we must limit our embrace. The old standard divisions of medicine into medicine, surgery, and midwifery, are then designed not in the following of nature, but for the sake of our own infirmities. Even when medical science was more restricted than it is to-day, no man could attain a fine and progressive mastery over more than one of these great divisions, and with the increase of time such a range of power becomes less and less attainable.

By taking parts from each, distinction may be reached partly upon surgical partly upon medical lines, and such integrating kinds of work are invaluable to us; but so far as I know, no one man was ever both a great surgeon and a great physician. Not only is the field too large, but the mental habit seems different; and we are thus compelled to recognise our limitations, and, labouring each in our own sphere, take good heed of the dangers of isolation, and avoid them as well as we

may. Perhaps the majority of my hearers are not devoted exclusively to medicine, surgery, or midwifery, respectively, but are engaged in the attractive field of general practice. There is something very fascinating in the freedom of that practice which, rapidly gleaning the chief results of the more special workers, binds them into temporary unity, and, seeking rapid and effective combinations for instant needs, develops a class of men inferior to none, if not superior to any in dexterity and versatility, in variety of knowledge and readiness of resource. Yet, even in the ranks of general practice, the distinction between physic and surgery is not lost; and not only in later life, but even in the wards of our hospitals, our better students betray some personal leaning and fitness for the one branch of their profession or the other. Thus it is, perhaps, that the border subjects lying between surgery and medicine are neglected, and the threads are not tied which should weave the two into a single work. If I may command your patience for a little while, I will drive the shuttle across this division.

My first introductions into the No-man's land between medicine and surgery were twofold. One of my revered masters—the late Professor Trousseau—interested himself deeply in the extension of surgery to the relief of medical cases. After the manner of his countrymen—less bound by the traditional habits which led their English brethren some years later gravely to consult with each other how far the operation of morpohic injection was permissible to their order—Trousseau took pleasure in operating with his own hand upon cases of empyema, of pericardial effusion, and so forth. It is not given to many physicians to train their fingers to the skilful use of the knife or the needle, but Trousseau's practice taught his pupils the value of early and effective surgical aid, and the calamitous results of its neglect. The next point of contact between surgeon and physician which engaged me, was in the field of diseases of the eye. I need not stay to estimate for this audience the great advances which have been made in this branch of clinical observation. Not the least of the advantages of the ophthalmoscope to me was, that it brought me, twenty years ago, into close collaboration with my surgical colleagues in Leeds—colleagues with whom I have worked in intimate association from that time until now, and to whom I owe more than I can adequately record or acknowledge. Working and reasoning with them, we have learned together to pull down the wall of somewhat jealous separation which too often divides the physician from the surgeon, to the great disadvantage of both, and to create a fellowship and community of purpose which, I venture to think, must greatly enlarge the powers of both. The united efforts of physician and ophthalmic surgeon have discovered a new region of facts and inferences that I will now scarcely enter upon, so well is it known, so far has it become the property of the whole profession. To two points only will I refer:—first, to the ill effects of latent strain of accommodation, and secondly, to optic neuritis not secondary to cerebral disease. There is no passing or superficial malady which is so vexatious as headache, and returning headaches sometimes prevent all the industry of young students. In many cases, no doubt, these headaches are more strictly neuralgic; but Mr. Brudenell Carter and others have proved that in many cases the headaches recurring on application to study are not due to cerebral overstrain, but simply to overstrain of the eye. An irregular cornea, or an unnoted defect of focal vision—and such defects are often latent—has caused a continued strain upon the highly nervous ciliary region of the eye, the pain of it has spread itself over wider nerve-districts, and a pair of spectacles has at once restored the sufferer to full powers of application. This striking discovery is now becoming well known, but it has been more recently suspected that, in some of the cases of optic neuritis discovered in young women and others in whom there is no cerebral disease, the inflammation of the disk may be due to previous strain of accommodation. If it be true, as Mr. Mason of Bath tells me, that in some of these cases a neglected optic neuritis may result in meningitis, we see before us a grave responsibility, and a wide field for successful effort in taking such order that the vision of young people shall be duly tested before they are put to continuous study. To another ophthalmic surgeon, Mr. Liebreich, we owe no less valuable teaching, who has pointed out to us how many spinal and other deformities, weaknesses and pains, are due to the dis-

* An Address delivered at the Inaugural Meeting of the Midland Medical Society, October 19th, 1881.

advantages of abnormal vision, and to the bad shape and ad positions of the windows and furniture of schools. I must also regretfully deny myself even any enumeration of the additions to our knowledge of palsies and of constitutional diseases, which have been given to us by ophthalmic surgeons. Nor is our debt to the aural surgeon to be considered much less. Many cases of extreme vertigo, long attributed to epileptoid states or to dyspepsia, are now known to depend upon aural states, and when due to syphilis or to mechanical irritation, may be cured. Some kinds of troublesome cough, again, now seem to be dependent upon aural irritation, and can, therefore, be cured by the surgeon. The danger to the encephalon of intra-aural mischief has been long known, but the various surgical methods—such as perforation of the mastoid bone—by which these secondary evils may be averted, are better understood and more fully carried out. My colleague, Mr. Atkinson, recently published a series of successful cases of this kind. The trephine belongs to the early history of surgery, but the discoveries of Broca, Hitzig, and Ferrier, are guiding the hand of the operator more and more surely to the probable site of an intracranial abscess or exostosis. Tapping of the head in hydrocephalus I refer to, I am sorry to say, only to condemn. We have given it a fair trial in Leeds, and I believe we have all discarded it.

To turn to the throat, excision of the tonsils is no new operation, but the constitutional mischief caused by such tonsils is better known, and is treated with more prompt and better results. No doubt many tonsillar enlargements are due to bad sanitary conditions, and I trust that so far the officer of health may take precedence of both physician and surgeon. To the work of laryngeal surgeons, physicians are deeply indebted for the revelations of the local processes of constitutional disease, and for new indications of intrathoracic tumours: unhappily, however, our means of cure have not herein kept pace with the new facilities of our diagnosis. The nausea, dyspepsia, and consequent loss of flesh and strength, which is often caused by the descent of the foul secretions of *ozæna* into the stomach, are now more accurately traced to their real cause; but *ozæna*, I regret to say, seems as incurable as ever. *Œdema* of the glottis, on the other hand, has been robbed of some of its terrors by the bistoury. The operation of tracheotomy still remains the sudden salvation of but a few, rather than the sure help of many. My own experience of it is not a very bright one; and although I feel it my duty to suggest it in acute cases so soon as the epigastrium and intercostal spaces are drawn in by inspiration, yet I do so with very faint hopes of a happy issue. The difficulty of feeding children with diseases of the throat is often insurmountable. In cases of scarlatina anginosa and the like, I have fed successfully, by pushing an India-rubber teat, connected with an elastic ball, into the nostril, and gently squeezing liquid food into the throat *per nares*. Mr. Charles Smith of Halifax, in a case we attended together, when this method failed, improved still farther upon it. He filled one of the long fine rubber tubes sold with Southey's trocars, with milk from a cup in which one end of the tube was sunk. At each time of feeding, the other end was quickly and easily threaded up the nostril and so into the throat, and by raising or lowering the cup the food ran by drops at the will of the operator into the patient's gullet. I have no hesitation in saying that this manœuvre saved the little one's life. When the nostrils are full of offensive discharge, they must previously be cleared with a syringe bearing a disinfecting solution.

The transition from diseases of the throat to glandular swellings of the neck, or scrofula, is easy; and herein I have an important message to deliver. I must now be brief, but for further detail can refer my hearers to my paper read before the Medical Congress in August last. In that paper I urged that, although individuals differ widely in the readiness of their lymphatic glands to undergo bubonic change, and that to this extent scrofula is subject to hereditary influence, yet, on the other hand, such hereditary tendency is not called forth save by local irritation. Such irritations are for the most part propagated from the mucous membranes of the mouth, throat, or ear. Nay more, I am satisfied that scrofulous neck may be set up by intense or prolonged irritation of this kind in persons having no hereditary tendency thereto. Pharyngeal scarlet fever, and the deposit in the throat of the effluvia of drains, are the most potent known causes of this kind, the latter being the more frequent. The mucous membrane sifts the particles from the indrawn air, and rapidly and sleeplessly drifts them out again in its currents. So long as the membrane remains in health all is safe, but there comes some check, by cold or otherwise, to the membrane, its surface changes, its activity fails, its currents slacken, the septic particles are arrested and inhere, and, exercising either a germinal or a catalytic action, prepare a more permanent bed for the development of morbid matters, and for the implantation of more. This goes forward, noticed or unnoticed, or the sore throat is treated in ignorance of its abiding cause. Gradually secondary changes from absorption arise. Glands remote

from the surface, and of small size it may be, enlarge slowly and caseate, but may escape observation. Thus are formed new centres of centrifugal infection, and thus is developed the full degree of the malady called scrofula. Against it the physician alone is feebly armed. By cod-liver oil and sea-air he endeavours to resist and counteract the malady; but a true therapeutics can be founded only upon the reasonings I have summed up, and must depend greatly upon surgical interference. The so-called suppurating glands under the jaw are in most cases no glands at all, but subcutaneous secondary abscesses. These, some bolder physicians aspirate or attack with potassa fusa and so forth; but do this as you may, the minor foci are untouched and uncleansed. The superficial abscesses must be freely laid open under ether, and the sinus or sinuses leading inward must be probed. There will usually be found a caseous gland hidden behind the sterno-mastoid muscle; this must be reached and scooped out, and all the enlarged glands discovered, scooped and cleared of their decaying elements.

This in practice is not difficult. Mr. Teale has worked on this plan in a number of cases of mine and his own—cases which were tabulated by our colleague, Mr. Hartley, and laid before the Congress. The results were excellent, both in respect of permanent local cure, of rapidly restored health, and avoidance of disfigurement. Subclavian, axillary, and other scrofulas must be dealt with in the same way.

The surgery of the chest is so large a subject, that I can only now sum up our chief results, and remind you how recent they are. In respect to the lungs, although we have realised that death by phthisis is for the most part death by septicæmia, yet we have obtained no direct method of disinfecting the decaying parts of a lung. Opportunities of tapping large posterior cavities of the lungs are not many, and I have not been much encouraged by the results of the few I have attacked. Still, when, in an otherwise healthy person, excavating mischief in the posterior and inferior part of lung is threatening life by septic poisoning, then we ought to interfere by aspiration, and after that by drainage if that be indicated.

That ordinary phthisical cavities will lend themselves to systematic aspiration or other tapping is not at present probable, and we must seek the cure indirectly by antiseptic and aseptic atmospheres.

With diseases of the pleura we have more surgical success, and have arrived at something like definite canons. We admit that, in acute cases, where a moderate and highly fibrinous exudation rises quickly and subsides quickly, we may trust to expectant or purely medical means. But when an effusion is more than moderate in amount, or being moderate remains long, then, in view of threatened damage to the soddened and retracted lung, we must take to methods more direct and draw off the fluid. If the fluid be purulent, we must make a free opening at the most dependent part, and empty and drain the cavity under antiseptic precautions and dressings. The antiseptic method often shortens these cases wonderfully. To proceed by repeated aspiration prolongs the case, keeps up the pressure on the lung, does not avert the formation of pulmonary fistula, and may leave caseous remnants to become dangerous in after time. If a case of empyema present itself to us with a pulmonary fistula, we must perform the same radical operation; thus securing a fall for our drainage, and sparing the lung from the continuous infection of foul secretions.

In pleural dropsies of renal, cardiac, or other origin, aspiration is of infinite value, and has superseded all iodised applications and such superficial remedies. Aspiration gives rapid and complete relief to dyspnœa, and its repetition is prayed for by the patient as the pleura refills. There is no limit to the repetitions of the operation. For instance, Dr. Wilson, of Doncaster, has performed it twenty-eight times in a case of Bright's disease I have often seen with him, to the prolongation of the patient's life and the relief of his great sufferings. The same patient, I may add, has been tapped thirty-three times in the abdomen, and eleven times in the legs, by Southey's trocars. There is no fear of such effusions turning to pus. These aspirations, even in thoracic cancer and the like, are often a great temporary relief, and defer the inevitable issue. In hæmothorax, the blood may safely disappear by reabsorption; but, if symptoms and signs suggest ichorous change, a puncture must be made, and degenerative mischief will probably make incision necessary. In pneumothorax, apart from septic effusions, puncture is very rarely needed or desirable. Paracentesis pericardii, by means of the aspirator, has been safely and successfully performed several times under my observation, and has taken its place as a recognised remedy. I have never seen any harm from the remedy, not even when the heart has been pricked in cases of mistaken diagnosis.*

The efforts of the surgeon to cure intrathoracic aneurysm have as yet been unavailing, and this awful malady continues to baffle our skill.

* A most striking case of drainage of pericardium and pleura, with recovery, is recorded by Professor Rosenstein, in a recent number of the *Lancet*.

I may pass by the wire coil and other devices to refer to the only hopeful procedure, namely, the method of galvano-puncture. Although I was among the first of those who tried the operation, and have had a long experience of it, yet I regret to say that increase of experience has diminished my faith; and, notwithstanding a few partial successes, I must still rank this remedy as of less average value than the treatment by rest, with large doses of iodide of potassium.

Not only does surgery help us in the treatment of diseases of the chest, but it is indispensable even for diagnosis. To distinguish between fluid and solid gatherings in the chest is at times impossible without the needle, and the same is true of like difficulties in the liver and elsewhere. Indeed the aspirator, and the familiarity with finely made trocars of various kinds, has given us new arms against obscure disease both in respect of diagnosis and treatment, in these and in many other organs.

Paracentesis of the liver is now as readily employed as in the case of the pleura. Hepatic abscesses are sought for by the needle, and their contents evacuated by exhaustion with a readiness and success, that a very few years ago would have seemed wildly improbable and dangerous. Yet the surgeon, if hepatic abscess be suspected, thrusts the instrument in by way of the axillary line, near or below the costal margin, and if he fail at first to draw pus away, does not hesitate again and again to repeat his bold incursions in various directions. No harm comes of this boldness, and the success of the operation in appropriate cases has quite changed and reversed their former gloomy prognosis. Hydatid cysts are rapidly emptied and cured in like manner; and I can scarcely forbear to refer to the complete surgical cure of a case of hydatid of the liver under my own care, in which, by repeated aspiration alone, a group of large sacs were gradually destroyed, though two of them suppurated freely. The defect in hepatic surgery which yet remains is the imperfection of topical diagnosis, so that punctures have in some cases to be repeated in vain before the abscess is tapped, and, after all, some collection of pus may escape the instrument.

The surgery of the gall-bladder is as yet in its immature youth. In extreme cases, as published by Lawson Tait and others, bold intervention on a heroic scale has saved life; but I look forward confidently to more than this—to tapping of the gall-bladder as the systematic and the only means of permanently curing those miserable cases in which the passage of gall-stones, repeated time after time, embitters, and even shortens the days of patients otherwise healthy. I know of no cases so distressing in which the physician is more helpless.

Few practitioners will look back with any content to their cases of ascites. Under all circumstances, but especially in cases of hepatic origin, this symptom has proved as intractable as its treatment by purgation has been distressing both to doctor and to patient. Is it not true that one has been wont to shrink from a case of ascites as from a hopeless strife? Here, surgery again has come to our aid. In early tapping we have a prompt, safe, and fairly effective relief—cure in such cases we cannot hope for. Late tapping is an opprobrium of medicine, but I have learned in recent years to tap as soon as ascites is prominent, and to repeat the operation as needed, using of course other remedies meanwhile. A few tapplings generally succeed in reducing the tendency to fill, the patient gains a substantial respite, and is saved the discipline of pulv. jalapæ co., and elaterium.

In diseases of the kidney we may now resort, not to the aspirator only, but to operative means far more radical.

In cases of impacted calculus, and of pyelitis with or without calculus, the physician, calling in the surgeon, cuts down upon the diseased viscus, and under the baptism of antiseptics, opens, cleanses, and even extirpates the part; his temerity and success being limited as yet rather by imperfection of diagnosis than of mechanical means. Even in incurable cases, a drainage-tube in the loin offers an easier outlet for septic fluids and particles, and relieves the sleepless torment of vesical irritation. While these words are written, there lie in the Leeds Infirmary no fewer than three cases—under Mr. Wheelhouse, Mr. Teale, and Mr. Jessop respectively—in each of which the loin has been opened and drainage-tubes inserted into the kidney with complete success, so far as success in those cases was possible. In these cases, as in all others to which surgical methods are extended, aid is given too late, is not asked for till mischief is beyond repair. As we gain knowledge and confidence this will be otherwise, and I shall not again witness, as I witnessed a few years ago, the slow destruction of a bright and promising young life by a calculus impacted in the kidney, without endeavouring at least to reach the offending body. Mr. Teale some time ago operated in such a case, but dared less than he would dare now, and the necropsy showed him that, had he explored the first portion of the ureter, he would have felt and easily removed a stone which, unrecovered, destroyed the patient. In later days, the whole kidney has more than once been extirpated with complete success; and such cases

were shown at Guy's Hospital during the recent meeting of the International Congress in London. The spleen also has been removed successfully so far as operation is concerned, but without benefit to the patient, and apparently with the result of causing distressing nervous symptoms. These, no doubt, were due to some accidental injuries to nerves which might hereafter be avoided. The safe opening and exploring of the abdominal cavity is, perhaps, the greatest achievement of modern surgery, and by it medicine largely benefits. By it especially are we strengthened against the dangers of intestinal obstruction. In cases in which the obstruction is hernial in character—in which, that is, by some twist, snare or fold, the gut is obstructed as in a hernia—I do not hesitate to say if, after a fair trial of complete rest with opiates and fomentations no relief seems probable, and death faces us—I say that the risk of opening the peritoneum and searching for the strangulation fades into little before the risk of *laissez faire*. In chronic obstruction, and where cancerous or other fixed obstacles may be inferred, then the propriety of such interference must be judged in each case by its own circumstances. I can only say that, in the many cases I have known thus dealt with, I have found no reason wholly to discourage the larger operation on account of its added dangers, and in more than one of them it has been distinctly helpful by giving the line for colotomy or otherwise.

Before leaving this subject, I would refer to a rule of my colleague, Mr. Jessop, who says that some cases of repeated or continuous wearing, aching pain of the abdomen, are explained by the discovery of umbilical herniæ, too small to cause obstruction or to catch the eye. Since I had this hint I have seen two such cases, and have cured them by reposition and the application of a button truss. Gastrostomy is as yet one of the difficulties of the surgeon, though it seems that the new method of securing the stomach to the incision before piercing the viscus may prove more hopeful. Mr. M'Gill, of Leeds, has just succeeded in a case of this kind. If gastrostomy should be robbed of its terrors it might be pressed into the service of the physician not only for the relief of cases of œsophageal obstruction, but also for the dressing of gastric ulcers, and for dilatation of strictures of the pylorus.

Kussmaul's method of catheterising the stomach in dilatation and catarrh of that organ does not seem, if I may judge by a recent essay of my friend Dr. Wade, to find favour in Birmingham. In a paper of my own, published two or three years ago, I expressed a contrary opinion, which time has strengthened. As in a dilated and never empty bladder decomposition is constantly going on, so in such a stomach a fermenting remnant is always left behind, to vitiate the incoming food. By completely emptying and purifying the viscus alone can we prevent this abnormal fermentation, and put the stomach in a position to recover its normal state.

Rectal diseases often simulate maladies which belong to the sphere of the physician, such as irritable bladder or uterus, diarrhoea, lumbago, sciatica and the like; and sad are the oversights of the physician who is not ready with that handy little instrument, the forefinger. By it he may again and again be led to the discovery of cancer of the rectum or uterus, of pelvic abscess, of displaced uterus, of prostatic disease, rectal syphilis, stricture of the sphincter ani, hæmorrhoids, fistula, and other local affections, all distressing, and some destructive.

Forgive me if my words to you to-night seem in this, and other matters, to be too trivial and too homely for such an audience, but I am driven to dwell on these familiar things by the sadness of lives wrecked for the lack of timely insight and timely skill. Undiscovered hæmorrhoids are not uncommonly the simple but most effective cause of a broken constitution. Unfortunately, they are too often concealed, purposely or not, by the patient. There is an unlucky notion abroad that the discharge is a safety-valve, and its suppression dangerous—a notion strengthened by the sense of relief which it gives to dilated vessels, and of the fulness and weight which these cause in the pelvis. Women, again, are naturally shamefaced in such a matter, even to their own sex, and being accustomed to the recurrence of sanguineous issues, they regard the bleeding of piles with the less anxiety. Finally, the obscurity of the discharge, and its loss in a dark water-closet, generally conceal from the sufferer some part at least of the mischief which is undermining him.

Let no weakly or anæmic person then escape inquiry on this subject, and you will help or save many a life. Be it remembered that long continued bleeding is not to be repaired at once. Even in the comparatively young, a large or continued hæmorrhage may leave its mark for the rest of the life, and take the use and happy vigour from length of days. Probably the whole organism and its parts have suffered too long from inanition to recover their normal tone, or the bleeding has so overstrained the blood-making organs that they never can again turn out a full tale of blood; or in some other way the organism, having long revolved in an abnormal equilibrium, cannot be brought back to its normal orbit. In some cases, indeed, continued hæmorrhage brings on ultimately a

state of incurable organic anæmia, with pigmentary retrogressions. Bleeding from the bowel is not an uncommon feature in hæmophilia, and I have found, remembering a hint of Sir William Jenner's, that such bleeding is rectal, and may be arrested by injection of tincture of iron.

The many difficulties which surround the practice of transfusion, forbid me as yet confidently to point to that process as the sure refuge in the sorest need which some day I believe it will be.

Pain in the back, or continued diarrhoea, or mucoid discharge, should of course always lead to a rectal examination; and yet how often is this overlooked, and grave rectal or pelvic mischief goes on unknown and unchecked.

To pass from looseness to constipation: here, too, the exploring finger may help us to diagnosis or relief. Strictures of the slighter degrees may be met with, or a backward uterus; or, again, an abnormally tight or hypertrophied sphincter. The sphincter ani should be examined in all cases of habitual constipation, for a very tight ring is no uncommon condition; the rectum bags, and sacculates above it, and, until the sphincter be freely stretched, no douches or other remedies can restore the due relations of the parts. In painful fissure, stretching of the sphincter is, of course, the foremost mode of cure; and it is surprising how many cases of bleeding piles, which have resisted treatment for years, are cured promptly by stretching a tight sphincter; but the value of the operation does not end here. If the sphincter be found large and tight, there is no knowing what reflex irritation has caused it; or, in turn, what uneasiness it may set up, or how far the rupture of one link in a morbid chain may dissolve the rest. Mr. Teale has said much on this subject, and had much success with the operation.

I must not attempt to enter upon the large field of surgical treatment of the maladies of the urogenital tract. The subject has of late become too familiar to need full discussion in this place, but I may refer to a few points which will bear repetition. Stretching of the sphincter vesicæ in the female, sometimes proves most efficacious in relieving that distressing affection—intolerance of the bladder. In other cases it fails as conspicuously, and it is far from clear to us wherein the distinction lies. So incessant, however, is the torment of this wretched condition when fully developed, and so destructive is it to the peace and health of the sufferer, that any reasonable means may well be tried which offer a chance of success. As the cause of the intolerance is often obscure, so this shot in the dark may not rarely hit the target. It is of course less likely to be useful in the vesical intolerance of pyelitis. To turn from the female to the male, I would refer to the now well known tendency of inflammations in mucous surfaces to spread along the tracts, a tendency often leading to great mischief in the urinary organs; wherein irritation, advancing from a urethral stricture, may reach the kidneys, and either set up chronic nephritis, or in some more sudden way arrest the action of the kidneys and cause death by uræmia. Every physician should, therefore, be tolerably familiar with the diagnostic use of the catheter and sound, for within the sphere of *his own* work he will be sadly at a loss without the catheter. A case of uræmia in an old person is found to depend upon a distended bladder, or a fever-patient from the same cause is lying in a typhoid state with the catheter only between him and death. These things happen within the experience of us all, and for many years I have never gone to a distant call without a catheter in my bag. No, "never," I must not say; it is too strong a word; for indeed I remember being called to a distance by a train too early to permit me to get my bag, to the bedside of a young man in convulsions. I found that his bladder was full up to the navel; his prostate was swollen and tender, and there was no catheter within reach. Such is the irony of fate.

Syphilis lies on debatable ground, between medicine and surgery, and primary sores fall more generally to the surgeon. I believe that a chancre should be cut clean away when first noticed, if its position render this possible. Not being myself very handy with the knife, I always burn them deeply out with caustic, and have had reason to congratulate my patients on the results. The consequences of any given chancre cannot be foreseen, but after such action, when taken in time, I have never seen any great development of secondary symptoms. Circumcision is gaining ground of late years, as a means of promoting purity both of mind and of body, and of preventing venereal disease in some degree. I believe the rite would in many cases prevent the occurrence of some reflex disturbances of a nervous kind which come under the eye of the physician. A friend of my own is engaged upon a paper which will advocate the general use of circumcision, but this crusade I will leave to this own right arm. Before leaving the genital organs, I would refer to the practice of washing out the uterus in puerperal septicæmia, for his is but one instance of a rule which must guide physician and surgeon alike, namely, wherever in the body there is any decomposing or effete matter, remove it by the shortest and quickest route possible.

The rapid subsidence of high temperatures which often follows the removal of decomposing matter from the womb or elsewhere, leads me to believe that the septic poison is so rapidly eliminated as to poison only for a day. A continued septic fever means, therefore, a daily dose of poison; remove the poison at its source, and the disease is at an end. I publicly urged this practice so many years ago, when it was almost unknown, that I may now be permitted to impress it upon you again when it is more generally accepted. This method has brought hope into the treatment of cases which without it were almost hopeless.

Maladies of the trunk and limbs will not long delay us. Physicians and surgeons alike are interested in the recent advances in the treatment of diseases of the spine, and of these I have nothing to say in detail.

Leaving uterine diseases on one side, as scarcely suitable for my present purpose, let me turn to affections of the limbs and to the pains and muscular failures occurring in them. No pains are more distressing and tedious than those of the shoulder and upper arm, pains which are often attended with muscular stiffness or wasting, and which are attributed at one time to a blow or fall, at another to rheumatism, at another to neuralgia pure and simple. Now many of these cases owe their cure to the surgeon, more especially when they are of longstanding and chronic habit. In some cases of pain in the cervico-brachial region the extraction of a carious tooth removes the cause of pain and the pain itself. In all such cases, therefore, the mouth must be closely examined. In other cases of pain with stiff and wasted muscle, there has been a distinct cause in the bruising of nerve trunks, and in them electricity rather than surgery is needed. But in other such cases of chronic malnutrition the results of acupuncture are often immediate and astonishing. Patients with stiff and painful limbs, to their own amazement, throw the crippled arms in the air or toss the crutch aside within a few seconds of the operation. In other cases, apparently the same, the method fails, and I cannot tell you wherein the difference lies. Mr. Thomas Smith informed me in respect of a case under our care, that such cases are often cured by free manipulation under ether, as though some adhesion pressing on a nerve kept up pain and paresis.

There is another kind of pain, most common in the leg, which is aggravated by walking, and is often of a tearing or wearisome kind. These pains, whether of a rheumatic origin or not, seem to lie in the periosteum; and by a linear incision through the periosteum, a young lady was quickly cured, who for a great length of time had been unable to take ordinary exercise. The pain lay in the leg, between the knee and ankle.

The wonderful success of rubbing and shampooing muscles weakened or stiffened by chronic rheumatism, old sprains or palsies and so forth, is more and more recognised; but, unhappily, this remedy has lain too long in the hands of persons of lower repute who have used it indiscriminately as a panacea. Delivered from the hands of quackery, rubbing is likely to take a high place among our remedial means. Among cases which torment both doctor and patient, I may refer to railway injuries. After such shocks and contusions, the muscles of back and limbs may remain for many months or for an indefinite time in a feeble, painful, and stiffened state. This condition is aggravated by inaction, but tends to recovery when the compensated patient is compelled to exert himself. I believe that the recovery of such patients is due not merely to the moral effort, but also to a painful and sickening strife with morbid muscles; and this recovery might be brought about more precisely and more quickly—in a word, more scientifically—by systematic rubbing and electricity.

Nerve-stretching is a means of relieving pain both in "functional" and organic disease, which has but recently established a claim to trial; and we must not allow the purely empirical character of the remedy to prejudice us against the increasing evidence in its favour. The cases of spinal disease in which, like those lately published by Dr. Morgan, horrible pain has been wholly banished by nerve-stretching, are now too definite and too many to be ignored; and nerve stretching, moreover, is the only remedy which offers much hope of relief to sufferers from the pains of chronic neuro-myelitis. In cases of violent neuralgia, again, and in spasmodic affections of muscles of the face and elsewhere, nerve-stretching seems to have wrought some remarkable cures. Somewhat early in the history of the remedy, I was disheartened by its failure in more than one case, but we must certainly have recourse to it again when occasion offers.

I must not leave the medical surgery of the limbs without a reference to Southey's method of tapping the limbs in anasarca, a method which, in my experience, has often proved invaluable both for the removal of serum and the prevention of erysipelas of the legs.

Finally, I will allude only to the efforts made by our surgical colleagues to aid us in the cure of diseases of the skin; and I will make special reference only to the scooping away of lupus patches which, in some cases under my care, has answered very well.

One surgical aid to medicine, gentlemen, I have reserved for the pleasure of making it my last word to night. This, although not mechanical, has done more than any one of those gifts of surgery to mankind to enlighten our darkness, to fortify our reason and to guide our handicraft—I mean the discovery and demonstration of that great agency which, dimly guessed at for many years, has but recently come fully into light—the work of germinal matter, or catalytic matter in the processes of death. These revelations we owe to many workers, perhaps to none more than to M. Pasteur, who is neither physician nor surgeon. But the working of these agents must be demonstrated in the simple and visible before it can be realised in the complex and invisible—on the surface of the body before the inward parts; and I am speaking to you as to one man when I say that which surgeons owe to the genius of Mr. Lister is but the beginning of the debt due to him from physicians. To him we owe that demonstration upon the outer surfaces of the body of the forces and changes which fail not to reach and disturb the innermost; and I would dwell upon the name of Mr. Lister as the last I will cite to-day of the surgical aids to medicine—an aid without whom many of the measures I have advocated to night would have been impossible.

SELECTIONS FROM CLINICAL LECTURES,

Delivered at the London Hospital.

By JONATHAN HUTCHINSON, F.R.C.S.,

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THE PRE-CANCEROUS STAGE OF CANCER, AND THE IMPORTANCE OF EARLY OPERATIONS.

GENTLEMEN,—The patient who has just left the theatre is the subject of cancer of the tongue in an advanced stage. As I demonstrated to you, the lymphatic glands are already enlarged. It is hopeless to think of an operation, and there is nothing before him but death, preceded and produced by a few months of great and continuous suffering. His case, I am sorry to say, is but an example of what is very common. Not a month passes but a case of cancer of the tongue presents itself in this condition. The cases which come whilst the disease is still restricted to the tongue itself are comparatively few; nor does this remark apply only to the tongue. "Too late! Too late!" is the sentence written but too legibly on three-fourths of the cases of external cancer concerning which the operating surgeon is consulted. It is a most lamentable pity that it should be so; and the bitterest reflection of all is, that usually a considerable part of the precious time which has been wasted has been passed under professional observation and illusory treatment. In the present instance, the poor fellow has been three months in a large hospital, and a month under private care. I feel free, gentlemen, to speak openly on this matter, because my conscience is clear that I have never failed when opportunity offered, both here and elsewhere, to enforce the doctrine of the local origin of most forms of external or surgical cancer, and the paramount importance of early operation. I have tried every form of phraseology that I could devise, as likely to impress this lesson. Nearly twenty years ago, I spoke to your predecessors in this theatre concerning the "successful cultivation of cancer"; telling them how, if they wished their patients to die miserably of this disease, they could easily bring it about. The suggestion was, that all suspicious sores should be considered to be syphilitic, and treated internally by iodide of potassium, and locally by caustics, until the diagnosis became clear. More recently, I have often explained and enforced the doctrine of a pre-cancerous stage of cancer, in the hope that, by its aid, a better comprehension of the importance of adequate and early treatment might be obtained. According to this doctrine, in most cases of cancer of the penis, lip, tongue, skin, etc., there is a stage—often a long one—during which a condition of chronic inflammation only is present, and upon this the cancerous process becomes engrafted. I feel quite sure that the fact is so. Phimosis and the consequent balanitis lead to cancer of the penis; the soot-wart becomes cancer of the scrotum; the pipe-sore passes into cancer of the lip; and the syphilitic leucoma of the tongue, which has existed in a quiet state for years, at length, in more advanced life, takes on cancerous growth. The frequency with which old syphilitic sores become cancerous is very remarkable; on the tongue, in par-

ticular, cancer is almost always preceded by syphilis, and hence one of the commonest causes of error in diagnosis and procrastination in treatment. The surgeon diagnoses syphilis, the patient admits the charge, and iodide of potassium seems to do good; and thus months are allowed to slip by in a state of fools' paradise. The diagnosis, which was right at first, becomes in the end a fatal blunder, for the disease which was its subject has changed its nature. I repeat that it is not possible to exaggerate the clinical and social importance of this doctrine. A general acceptance of the belief that cancer usually has a pre-cancerous stage, and that this stage is the one in which operations ought to be performed, would save many hundreds of lives every year. It would lead to the excision of all portions of epithelial or epidermic structure which have passed into a suspicious condition. Instead of looking on whilst the fire smouldered, and waiting till it blazed up, we should stamp it out on the first suspicion. What is a man the worse if you have cut away a warty sore on his lip, and, when you come to put sections under the microscope, you find no nested cells? If you have removed a painful, hard-based ulcer of the tongue, and with it perhaps an eighth part of the organ; and, when all is done, and the sore healed, a zealous pathological friend demonstrates to you that the ulcer is not cancerous, need your conscience be troubled? You have operated in the pre-cancerous stage, and you have probably effected a permanent cure of what would soon have become an incurable disease. I do not wish to offer any apology for carelessness, but I have not in this matter any fear of it.

EMPIRICISM AND SPECIFICS.

The patient whom we are about to discharge from Talbot ward, cured of severe pemphigus, was admitted for a special purpose. He was sent in by my friend and former pupil Dr. Tom Robinson, in order that he might be cured. You will say that the hope of cure is the motive which brings most of our patients to us. True; but in this instance there was something more than this. Dr. Robinson could easily have cured him himself, but he sent him here in order that I might do the miracle of cure under your eyes, and thus claim your belief in the efficacy of drugs. You will remember his state when admitted; he was covered from head to foot with bullæ; the trunk was less severely affected than his limbs, head, and genitals; on these, there was nowhere a space as large as the palm free from bullæ, and on the trunk also there were a considerable number. He was in a miserable condition from pain and irritation. The eruption had been out about ten days, and it affected the mucous membrane of his mouth as well as the skin. You may remember that we kept him in bed for a few days before we used the magician's wand, in order that all might see that there was no natural tendency to amelioration. More bullæ came out; then, without making the slightest change in diet, we ordered a few drops of a tasteless solution of arsenic to be swallowed three times a day. The result was that, at our next visit, most of the bullæ had dried, and there were no fresh ones. He continued to improve greatly for ten days, when suddenly a few fresh small bullæ seemed to threaten a relapse. We doubled the dose of our remedy, making the dose eight instead of four drops; and, from that day, with the most trifling exception, the recovery has been uninterrupted. With such a fact before you, let me beg of you, gentlemen, to believe in drugs, and to treat empiricism with respect. In the prescription which I ordered, I availed myself solely of empirical knowledge; I prescribed, just as any old woman might prescribe, that which I knew would do good. Concerning the nature of pemphigus, I knew nothing; of its cause, absolutely nothing; of its clinical relationship, but little; of the *modus operandi* of arsenic, I knew scarcely more; but this I did know as a fragment of assured conviction, that arsenic would cause the pemphigus eruption to disappear, and the patient to regain his health. Far be it from me to speak slightly of scientific work; let us by all means work as hard as we can in the laboratory and microscope-room, and penetrate as far as we possibly can into the mysteries of disease; let us never weary in our search after causes, or in our endeavour to find practical application for the facts of physiology. But, whilst doing this, let us remember that, as regards the relief of suffering, much of our usefulness must be based upon knowledge which is nowise scientific, but simply a matter of experience and memory. We have many specifics for many maladies, or rather for many symptoms, and he is the most successful practitioner who has stored in his memory the largest number of them. As years go on, we shall add many more to our list; and I doubt not that there are those who now listen to me who are destined to give help in their discovery; for discoveries in this direction are rarely made by single observers, but rather by the concurrent work of many experimenters, all keeping their eyes open, willing to try new things, and resolute to store faithfully the results of their observations. Iodide of potassium for tertiary syphilis, the bromide for epilepsy and as an anaphrodisiac, iodoform for phagedena and specific ulceration, balsam