erythroplœum and spartein—increase the heart's strength, raise the vascular tension, and are useful not only in sustaining the circulation, but in aiding elimination. This view of the action of cardiac tonics, which has revolutionised the treatment of heart disease, we owe chiefly to the experiments of Traube, although my own experiments, made in the laboratory of Sir Douglas MacLagan under the direction and by the help of my teacher and friend, Dr. Arthur Gamgee, may have helped towards its general acceptance in this country.

Future of Pharmacology.—But perhaps the most promising thing about pharmacology is that we are now just beginning to gain such a knowledge of the relationship between chemical structure and physiological action that we can, to a certain extent, predict the action of a drug from its chemical structure, and are able to produce new chemical compounds having a general action such as we desire, for example, anæsthetics, soporifics, antipyretics, and analgesics, although we have not yet arrived at the point of giving to each one the precise action which would make it most suitable in any particular case. Even when we do not know the chemical structure of a drug we may be able, from noticing one of its actions, to infer that it possesses others. We are, indeed, getting a knowledge of the action of drugs both of known and unknown chemical structure and a power of making new remedies which will, I believe, enable us within the next five-and-twenty years to cure our patients in a way that at present we hardly think.

Training of Medical Students.—But the excessively rapid development of medicine and medical sciences requires that men who are entering the profession should not only be taught the things that we know now, but should be so trained as to enable them to keep abreast more or less with medical progress. This, I believe, can only be done by giving them a thorough grounding in chemistry, physiology, general pathology, and pharmacology; and this training must be essentially of a practical nature, not only in the way of demonstrations, but of actual work on the part of the student himself. It is, as I have already said, most extraordinary to find that at the time when chemistry is becoming most essential to medicine, some medical boards should so reduce their requirements in the examination on this subject as to render the student's knowledge of it both limited and superficial. But while chemistry may be regarded as at present badly treated, the same cannot be said of histology, and while five-and-twenty years ago comparatively few students possessed a microscope, there is hardly one now who has not only got one at his disposal, but is also able to use it.

The introduction of training in practical physiology, which we owe in great measure to Professors Burdon Sanderson and Michael Foster, has given to the student a basis for his medical studies, such as practical anatomy affords surgery. When I took my degree in medicine I had never looked into an eye or an ear or down a throat; but now we have departments for these specialities, and for others, such as skin and electrical treatment, at most hospitals. I am, unfortunately, unable to give an account of the development of special departments in different hospitals throughout the country, but at St. Bartholomew's there was none for the throat until 1874, when I went to Vienna for six weeks to learn the laryngoscope, and, by the kindness of the Governors, on my return I was provided with everything requisite for opening a special department. But this department, while I held it, was used almost entirely for the simple treatment of patients; whereas, by my successor, Mr. Butlin, it has been converted into a means for the instruction of students. It is not, however, in this department only that the cases at hospitals are better utilised for instruction. The same thing has gone on in all departments both general and special, and the change in this respect which I have noticed in the twenty years during which I have seen out-patients at St. Bartholomew's has been very great. Everywhere we find men eager to learn, and the desire for knowledge which they show as students they carry with them into practice, where they read and work in a way that makes one frequently astonished that men, the greater part of whose time is taken up in seeing their patients, can manage to keep themselves so well abreast of all the new discoveries. In doing this, great aid has been afforded to men unacquainted with French and German, by the abstracts of foreign papers published in medical journals

and yearbooks, and especially, perhaps, by the *Medical Record*, now unfortunately defunct. Its place, however, has been already filled, and shortly, we hope, will be much more than filled by the SUPPLEMENT to the BRITISH MEDICAL JOURNAL. Nor is it only in supplying the members of this Association with an epitome of current literature that the Council have shown both wisdom and liberality, for, by granting aid to scientific research and to the investigation of therapeutic questions the British Medical Association has shown a farsighted policy and a most praiseworthy desire not to be content with merely keeping abreast with medical progress, but to push onward in the van and further by every means in its power the rapid advance of medical knowledge, which is practically the power of rendering aid to suffering humanity. Nor are the periodical meetings of the members of this Association without advantage, for journals may remain unread or be laid aside for a convenient season which never comes, but the stimulus of personal contact and interchange of ideas tends greatly to further the object which we all have at heart, the prolongation of life, the preservation of health, the alleviation of pains and the cure of disease.

ADDRESS IN SURGERY,

BY

JOHN CHIENE, M.D., F.R.C.S.Ed., F.R.S.E.,

Professor of Surgery at the University of Edinburgh; and Surgeon to the Royal Infirmary, Edinburgh.

ON REST AS A THERAPEUTIC AGENT IN SURGERY.

MR. PRESIDENT AND GENTLEMEN,—“There are duties difficult of fulfilment pertaining to every position in life, and there are duties attached to public professional life from which no man can assume to himself the right to shrink, with whatever diffidence and incapacity they may be undertaken.” These are the opening words in one of my favourite books, and they express my feelings so well to-day that I do not hesitate to adopt them. Some years ago a friend of mine was sitting in the Surgical Section at a British Medical Association meeting. He overheard a conversation near him. “Who is that sitting at the table?” said one, pointing to an office-bearer. The answer was, “I do not know him, but he must be a wise man—he has never opened his mouth since I entered the room.” The person under discussion was then Secretary of the Surgical Section; he now occupies a more important position, and his first thought this afternoon in addressing you is that he is throwing away his best chance of being considered a wise man. The silent people in this world, as a rule, have the best of it, but silence is not permissible to me to-day.

In the Address on Surgery I come before you with a free hand. The burden that is upon me is by no means lessened by the thought that the invitation is mainly intended as a compliment to the school with which I am proud to be connected, and that many of my audience, who are Edinburgh men, hope that, speaking in the name of the school, I will not speak unworthily. The mode, the method, and the subject lie solely with me, and I trust I have not erred in the choice that I have made.

Since my student days the importance of principles has ever been before me, due, as every old Edinburgh student in the sixties will acknowledge, mainly to the teaching of Good-sir and Syme. Since my student days, when Carlyle was our rector, hero worship has been to me an incentive and an encouragement.

My hero for to-day, whom I never saw, but whose one great work has been to me a classic, taught me to value a great principle, and I cannot but think that those present who knew him personally, who worked with him and were taught by him, will be the first to acknowledge that in taking him, and the great idea which he loved to inculcate, as my mainstay to-day, I am leaning on a strong staff, and that it will be entirely my own fault if I do not make the subject an interesting one. To those present who knew him not—there are not many present who do not know his work—it is an absolute pleasure to me to be the imperfect medium of an intro-

duction. My hero is John Hilton, and my principle is *rest as a therapeutic agent in the cure of surgical ailments.*

Judging from the catalogue of Hilton's writings given in the great *Medical Dictionary*, which we owe mainly to the untiring energy of a not infrequent visitor at these meetings, Dr. J. S. Billings, of Washington, John Hilton must have been a silent man. Apart from those who were his immediate pupils, he seems to have given others only two opportunities of judging of his worth. On both occasions—thanks to the Royal College of Surgeons of England, who called on him to give the Hunterian address in 1867, and to deliver the lectures at the College in 1861, 1862 and 1863—he was pushed into positions which compelled him to put his ideas in print. It is to these lectures I owe so much, and my obligations are so great that I am compelled to embrace this opportunity of inculcating Hilton's great idea of the value of rest in surgical practice. I read the book by Mr. Joseph Bell's advice in my student days, and after I became a teacher in surgery I again renewed my interest in it, from reading a short paper by that master in surgery Sir James Paget, who gave his own personal experience of the value of Hilton's method of opening an abscess. I have ever since given Hilton a principal place amongst my teachers. I have made constant reference to his worth in my daily work as a teacher, and recommended all my students to make part of themselves the great principle with which Hilton's name is so honourably associated. Bacon says there are books to skim over, books to read parts of, books to absorb; Hilton's book on *Rest and Pain* is one to absorb. Since Hilton's time—born in Essex in 1804, died in 1878—many changes have taken place in the practice of surgery. I ask, and wish to try and answer the question, What bearing has Hilton's main idea—good for all time—on our present work as surgeons? While I gladly grant that in this audience there are those who could, from more extensive knowledge, bring Hilton more vividly before you, yet I will yield to no one in my intense admiration for the man, and for the principle.

In estimating the impression which Hilton's book has made on my mind, and the effect it has had on my teaching and practice, it is very evident that I must draw largely for my illustrations upon my personal work; and, if I choose simple things, I have in a predecessor, Mr. Teale of Leeds, an example of a surgeon who took in great part the simples as the subject of, in my opinion, one of the most interesting addresses in surgery recently delivered to this Association. I will not only speak of things which illustrate the value of rest, but of things which cause unrest, the removal of which is the main aim of the surgeon. I am not going to attempt to define rest, or its opposite—unrest. There is always some molecular movement going on during life; a part can never be in a state of absolute rest. The term must always be a relative one. It has been divided into mechanical and physiological, but this division is a purely arbitrary one. It has, however, a mental and a bodily aspect;—a psychical and a physical side; and without further preface I will take up first the mental, and afterwards the bodily aspects of rest and unrest.

I estimate, year by year, more highly, the mental aspects of rest. The late Mr. Goodsir divided physiology into two divisions, anatomical and psychological, and in his graduation address in 1859 he laid down this axiom, "that the greater liability of man to disease is intimately related to his higher conscious intelligence;" he also says "that in the treatment of disease the adjustment may require to be, and in general must be, directed more or less to the psychical as well as to the physical conditions of the case."

We all know, it is not work, but worry—mental unrest—which kills, so a person will bear much physical discomfort in order that he may be relieved of the mental discomfort of his condition. I take into consideration in my practice and in my operations the effect that my decision in recommending any special treatment will have on the mind of my patient. In operations for cancer we all know how frequently they are unsatisfactory, but I think we hardly estimate the great mental depression which often follows on our refusal to attempt to give relief, more especially after the recurrence of the disease—after the primary operation has taken place. An attempt—even if unsuccessful—to remove a tumour will often give the patient a feeling of mental rest

in the very thought that no stone has been left unturned in the endeavour to give relief. I desire as far as I can to give my patient mental rest, and for this reason I am often impelled to make the endeavour by operative means to give that relief which, looked on simply from the physical side, it may be impossible to underestimate, but, looked at from the psychical side, it may be impossible to overestimate. For example, there is a class of cases which I have sometimes termed the "phobias"—syphilophobia, cancerphobia—in which the whole disease is psychic, and I know no condition in which I have more pleasure in giving relief, because the condition of these patients is a most unhappy one. There is one aspect of the mental side of disease which has, in my opinion, not received the attention which it deserves. When a patient is confined to his bed, away from his work, he is often suffering as much from the worry of mental inactivity as from the physical disease for which he is under treatment. I feel sure that the prescription "don't worry" might with advantage be burnt, and that "do some work" should take its place. I have seen patients suffering from aneurysm who have shown decided improvement by encouraging them to do some light mental work.

This is an age of diagnostic incisions on the part of surgeons, and faith on the part of patients that after the incision has been made, and the part thoroughly examined, the surgeon will have more light, and be best able to judge as to what should be done. The patient may come out of the anæsthetic minus a limb, but he will feel that it was taken off only after the most careful examination and the fullest possible light had been thrown on the diseased area by free diagnostic incisions. One is reminded in this connection of a song by Sir Douglas Maclagan, the Nestor of medicine in the capital of the North.

Case Second. An unhealthy lad
To Duncan's Ward came in, Sir,
And showed to him a shocking bad
Affair upon his shin, Sir.
Says Duncan, twirling of his probe,
I fear that this won't cobble;
'Twill never make a decent job,
And all your life you'll hobble.
He gave the ether. Off the leg
Was snipped before their noses;
Chap woke and found a wooden peg
Where there had been necrosis.

The limb at that time was taken off because the surgeon said it should come off; now a limb is taken off because the surgeon feels and sees physically, not psychically, that it must come off. In diagnostic incisions I believe we have a valuable aid in avoiding psychical unrest. These diagnostic incisions are the direct outcome of the minimised danger of such incisions. A new diagnostic power has been placed in our hands. The first step in the operation is the diagnosis, and the surgeon has no hesitation in taking this step. He requires from his patient a free hand, he takes less on faith and more on sight. He avoids the necessity and uncertainty of guessing, which perhaps gave to the surgery of the past much of that something which made great diagnostic surgeons but we must remember that this diagnostic power was the direct outcome of an experience largely founded on mistaken diagnosis. The present method trains the ready surgeon, and is in my opinion the method which best attains the object desired, namely, that the best is done for the patient.

I need not dwell on anæsthesia as a cause of rest in our patients, except to say that I still adhere to the views I expressed in a paper on Chloroform, read at the Cardiff meeting in 1885. I still hold that chloroform is the best anæsthetic; and I cannot help, as a pupil of Syme, feeling pride that the decision of the Hyderabad Commission, presided over by Dr. Lauder Brunton, so fully bears out the views held by that far-seeing man. Cocaine as a local anæsthetic is, in my opinion, of great value in adults. I have never seen any of the evil results, local or general, which have been described. We must take care to use a pure solution, and see that we do not inject it directly into a vein. These are the precautions which I have taken; and I use it either as a solution of salicylate of cocaine, or kept in pellets, and dissolved when required in camphor water or distilled water. I never inject more than half a grain. In the passage of bougies, in phimosis, in tracheotomy, in fissure, and in simple cases of fistula in ano, in excision of tonsils, before injecting iodine into

a hydrocele, in small wounds before stitching, I have found the drug valuable. I allow four minutes to elapse after injection before performing the operation. To prevent urethral fever—a purely nervous lesion—before passing an instrument I have used it in the form of a cocaine bougie. It is right to say that the use of local anaesthetics, such as cocaine, ether, or chloride of ethyl, may be overdone. The work of the surgeon may require to be done in too hurried a manner, not altogether satisfactory either to the patient or to the surgeon. Mental unrest, arising from a feeling of work imperfectly done, worries the surgeon; and in any operation requiring time chloroform is to be preferred to the local anaesthetic.

Pain given to a patient, whether in the dressing of a wound or in the examination necessary to make a diagnosis, is a most fertile cause of unrest. Confidence is lost between patient and surgeon: this is more especially true in children. When I hurt a patient I always feel I am doing or have done wrong. Healthy wounds are not painful; the healing of a wound is a physiological process closely allied to—in fact, it is—growth. Inflammation in our wounds can be avoided, and, if avoided, then pain as a cause of unrest is unknown. Pain is to be avoided by every means in our power. Any movement of the patient is apt to cause pain, and every endeavour should be made, in the examination of the patient, to avoid pain. Also in the dressing of the wound the avoidance of movement is all-important, and in this connection I can speak very confidently of the value of the many-tailed bandage; the wound can be exposed without moving the limb. It is sometimes used to take the place of an ascending spiral; it can, however, be arranged as a spica or figure-of-8 bandage; any portion of the body can be covered with a many-tailed bandage. It always reminds me of the main characteristic of the British army, each turn working well in unison with the neighbouring turns, and each turn having an independent power in itself—for turn read soldier. In fracture of the pelvis it is infinitely preferable to a roller bandage; it can be tightened and loosened without moving the patient.

One of the most frequent causes of local unrest in wounds and the free serous oozing which accompanies it is the use of unnecessarily strong antiseptics. We cannot avoid them altogether. We must use them in a thorough manner for the purification of our hands, of the skin of our patient, and for our instruments if we have not a sterilising apparatus: but as regards the wound itself, given an aseptic wound to begin with, the less of the antiseptic the better; it is an irritant. A good many years ago, a smart writer in a medical journal said, "Lister's arguments are getting stronger, his solutions are getting weaker." If he had said, "his arguments are getting stronger because his solutions are getting weaker," he would have been nearer the truth. Asepticism is taking the place of antisepticism. The extent to which this can be carried out will depend on the security we feel when we operate on unbroken skin that we have not introduced any causes of fermentation. If we have not this security, we must wash out our wound, after stitching, with an antiseptic, but let it be followed by an aseptic fluid in order to remove the antiseptic—the irritant—or at any rate see that no antiseptic is left in the wound. It has ever to be borne in mind—and this renders the work of the surgeon a more responsible one—that the main danger of contamination is from what is directly put into the wound, rather than from what falls into the wound. I am not prepared to allow that a wound is never contaminated from the air, but I am prepared to acknowledge that dirty skin, dirty instruments, and dirty hands are the main factors which cause fermentation in our wounds. In an investigation recently conducted in my wards by Dr. Hutton, fifteen different organisms have been found in the air; most of these are undoubtedly innocuous, but some may be hurtful. Never use a sponge twice in an operation, or, better still, never use a sponge at all; gauze which has been boiled and then placed in weak corrosive lotion is better than any sponge.

Another aspect of Hiltonism is the use of absorbable drains, so that dressing of the wound is not required in order to remove the drain. Pressure and careful apposition of the edges and surfaces, combined with the absence of any

irritating antiseptic, have, to a great extent, done away with drainage of any sort; but here I think I have overshot the mark, because if any bleeding occurs, and if the pressure is not accurate, accumulation of blood takes place, and delayed healing is the result. This has lately been one of my main troubles in wounds, and I recall three cases of excision of the mamma within the year in which this has occurred and delayed union. I think the safer plan is drainage for twenty-four hours during the time when reactionary hæmorrhage is likely to happen. If india-rubber tubing is used it can be arranged so that it can be removed without disturbance or exposure of the wound; cause the tube to project beyond the wound surface, then the blood and serous discharge pass into the substance of the dressing, and have no tendency to pass along the skin surface to the edge of the dressing. Free evaporation through the dressing is all-important. Dr. Wearne Clarke has recently brought under my notice a corrosive dressing, in which the outer layer is impermeable to liquids, although it allows of free evaporation. This dressing is made by Robinson and Co., Chesterfield, and from the trial which I have made of it, I think it will take a place in surgical practice. Free drainage and its accompaniment, rest, is best attained in psoas abscess by a posterior opening at the lowest point of the abscess cavity (patient recumbent), in the angle between the outer edge of the erector spinæ and the crest of the ilium. From this opening we can sometimes reach the diseased area in the bodies of the vertebrae, and remove necrosed fragments of bone. So also in retropharyngeal abscess: an opening posterior to the sterno-mastoid muscle acts in the same way. In both these forms of abscess the aseptic management of the case is more easily carried out than when the opening is anterior. I have followed this method of treatment since 1876, and beg to recommend it to the profession.

Use leaden splints to steady limbs after amputation and excision. Shape the splint so that it can be unfolded without moving the limb. Anchor the arm by the side with a leaden splint after excision of the mamma. Apply your pressure firmly, but always leave a distal portion of the limb exposed, so that, if it swells, then the pressure is overdone and the bandage must be loosened. We know pressure is properly applied to any part if it fulfils two conditions, painlessness and non-interference with the blood current through the part.

Horsehair stitches are valuable, combining rigidity and elasticity—rigidity acting as a splint steadying the edges, elasticity enabling them when cut to be removed without pain. After cutting a stitch, lay hold of the knot and pull towards the side on which the loop has been cut; in this way all strain on the edges of the wound is avoided.

A plaster applied over a boil in its early stages acts as a splint, steadies the part, and relieves pain. The boil is frequently aborted by this simple means.

These, gentlemen, are simple things, and I feel as I write that I owe an apology for their simplicity. They are, however, all illustrations of the effect which Hilton's work has made on my practice, and I hope they will be pardoned.

The value of extension in the treatment of fractures of the lower extremity is universally acknowledged; we have only to take care that it is not overdone. I do not think it is sufficiently often used in fractures of the upper extremity or after excision of the knee and elbow. In fractures, injuries, and diseases of the spine, in sacro-iliac disease, and in fractures of the pelvis, the use of double extension is also of undoubted value. I have used it since 1877 in these conditions, and I can recommend it with confidence. It may be used in three ways: (1) the patient horizontal, and a weight applied to the limbs, with a counter-extending weight to the head; (2) the head of the bed raised, a weight to the head, and the body acting as the counter-extending force; (3) the foot of the bed raised, a weight applied to the limbs, and the weight of the body acting as the counter-extending force. It is most valuable in the mobile portions of the spine—the cervical and lumbar regions. In dorsal disease, the first method is mainly used. In cervical disease the second method is used; in lumbar disease, in sacro-iliac disease, and in fractures of the pelvis, use the third method. As the pain subsides, rotation must be prevented by the double long splint when the disease involves the lumbar, dorsal, and

pelvic segments. In the cervical region fix the head with a hollowed sand pillow or with a poroplastic splint, or with Fleming's india-rubber collar. Treves has demonstrated the value of rest in enlargement of the lymphatic glands in the neck by a similar contrivance.

In all cases in which complete rest of the trunk is called for, use a thick and firm mattress made in three pieces, the central portion of which can be withdrawn for the performance of the acts of defecation in both sexes, and the act of urination in the female. The prevention of bedsores by the facility with which the sacrum and buttocks can be examined, and the dressing of these sores, when they do occur, is greatly facilitated by the triple mattress. In the diagnosis of injuries in the region of the hip, the use of Nélaton's line has been given up in my practice, because in order to reach the ischial tuberosity necessary for estimating the line the patient has to be moved. Its place is taken by noting the want of parallelism between two tapes, one passing through the anterior superior spinous processes, and the other through the tips of the great trochanters of the femur.

On the arrest of hæmorrhage we have a valuable paper by Dr. Milne Murray in the *Edinburgh Medical Journal* of August and September, 1886, on the explanation of the action of hot water, which well illustrates rest. He shows that the general shock and the local reaction are greatly lessened after using hot water, as compared with the former method by means of cold. In epistaxis prevent the air passing through the nasal cavity by tightly grasping the nose, and the epistaxis will frequently cease, the part being kept at rest.

In cranial surgery, in the curved incision, as suggested by Mr. Victor Horsley, we have a means of restoring a flap to cover and give support to the denuded brain tissue or dura mater. In intracranial hæmorrhage, intra- and extradural, we now feel justified in cutting down and arresting the hæmorrhage by ligature, or by the hot douche, and from one case in which I operated on a person, comatose, with Cheyne-Stokes respiration, and a pulse of forty to the minute and on the point of death, I feel justified in recommending that, in apoplexy, an opening into the cranial and dural box is a justifiable surgical procedure, giving rest by relieving tension. This patient was shown by Dr. Smart at the Medico-Chirurgical Society of Edinburgh in June of this year.

In spasmodic wry-neck we have the patient in constant unrest. What relief is given by excision of a portion of the spinal accessory nerve? In March, 1881, I showed a case at the Medico-Chirurgical Society of Edinburgh. From the result in that patient, and from similar cases which I have seen since 1881, I think the operation well worthy of more extended trial.

In rectal surgery gradual dilatation of the sphincter and before operations gives rest after the operation, as it is followed by a temporary paresis. In colotomy the inguinal region is preferable to the lumbar, because mental worry is avoided by making an artificial anus in a situation which the patient himself has under command. In lumbar colotomy the *cul de sac* between the rectal stricture and the opening in the colon fills with feces and causes unrest. In inguinal colotomy, if the opening is intended to be a permanent one, I bring the whole lumen of the sigmoid flexure out as a loop through the wound in the wall, and fix it there with long pins passed through the abdominal wall and mesocolon, and again through the abdominal wall, bringing the parietal peritoneum in contact with the visceral peritoneum. Stitches are a source of unrest; simple apposition is all that is necessary to obtain firm union.

In the ligature of internal piles the division of the mucous membrane at the anus with scissors before transfixion and ligature and tying the ligature tightly so as completely to strangulate the pile are both means which diminish pain after the operation. The pile mass dies without any inflammation, it dies of dry painless gangrene. If this had been more frequently attended to, we should have heard less of other methods of treating internal piles. While I say this I desire most emphatically to express my complete accordance with Whitehead's view, that in cases in which the whole circumference of the gut is affected excision is the most thorough and satisfactory method of treatment.

There is no organ in which the value of rest is better illustrated than the bladder. In disease its systole and diastole

can be checked in different ways, and the cystitis caused by the unrest, as evidenced by frequency of micturition, is relieved. This can be done by fixing a gum elastic catheter in the bladder, taking care that the eye of the instrument is just within the cavity and attaching to the catheter an indiarubber tube which passes into a vessel at the side of the bed. In 1876 I showed that if the tube passes under water and if the instrument and tube are full of fluid there will be, by the siphon action of the arrangement, if the water in the vessel is at a lower level than the bladder, a head of water, which, by its suction, will remove the water from the bladder as it passes from the ureters. The amount of suction will depend on the difference of level, and I have found by experience that a foot of fall is generally sufficient to keep the bladder empty. If the fall is greater, then the mucous membrane is apt to be sucked into the eye of the instrument, and a block takes place, the bladder filling with urine. When this happens pain will at once be felt by the patient; in fact his sensations are the best guide to the height at which the vessel at the side of the bed should be placed. By this simple means we can give the bladder rest. In external division of stricture of the urethra the same means can be used to keep the wound absolutely dry and facilitate healing. We can also rest the bladder by perineal or by suprapubic cystotomy. In either case the bladder collapses and the viscus gets rest. In intractable cases of cystitis in the female the suprapubic opening deserves further trial. In connection with the bladder may I remind those present of the debt we owe to Bigelow for showing us that the unrest after lithotripsy is due to fragments of stone left in the bladder after crushing, and how important it is to crush and remove entirely all the fragments at one operation?

In hæmorrhage from the bladder or prostate a suprapubic opening arrests the hæmorrhage, the cause of which is the contractions of the bladder, which at once cease when the bladder is opened. The hæmorrhage during the operation may be checked by the use of the hot douche.

In vesical hæmorrhage the mere washing out of the bladder with hot boracic lotion often checks the bleeding—in fact, hæmorrhage from any cavity is most easily and satisfactorily checked by the hot douche.

In tracheotomy, Hilton points out the value of rest to the inflamed larynx. One of the main objects of the surgeon is to prevent any blood getting into the trachea, and thence to the lungs, where it is the most fertile source of unrest, setting up pneumonia, the common cause of death after tracheotomy, when the death is not due to the disease for which the operation was performed.

In the treatment of cut throat, if we perform tracheotomy at once, and accurately unite the wounded surfaces, we obtain more rapid healing, because the wound is not used as a funnel through which the air is admitted to the lungs. Movement of the parts is reduced to a minimum; the part in fact is kept in a state of rest encouraging and facilitating healing.

In the application of a bandage to varicose veins, let us see that it is applied before the patient gets out of bed, and taken off after he is in bed; so also in the application of a truss in hernia the same rule must be constantly followed. Allow the veins to fill, or the hernia to come down once in twelve hours, and the bandage or truss ceases to act as a curative, and only acts as a palliative agent. We allow, by the vein filling or the hernia coming down, a temporary unrest which does away with the good of the previous twelve hours' support of the retentive apparatus. It is well to note that continuous gentle elastic pressure will often act most efficiently, painlessly, and restfully in reducing an irreducible hernia, a prolapse of the rectum or a paraphimosis.

I might multiply examples, but I have given enough to illustrate my subject. I have endeavoured, to expound the healing doctrine of rest. It has been my privilege to point to John Hilton as one of its great expounders, who has, more than any one else, impressed me with its value in surgery. I am anxious that anything I may have said will in no way interfere with the necessity, for those who have not done so, of a careful perusal of his work. You will not agree with many things he says. Take comfort in the thought that it must be a poor book with which you are entirely in agreement, its stimulating effect on you will be absent. After you have read the book you will grant that

in him we have a careful observer and a conscientious worker, and one whose methods we will do well to imitate.

Before I conclude I would wish it to be understood that there is another side to this picture, or perhaps it may be the same picture looked at from a different standpoint. It is that much harm may be done by too excessive attention to rest. Evil may result from too prolonged rest. Mechanical rest may, in one sense, be antagonistic to physiological rest. Mechanical rest, in many cases, must be interfered with in order to attain physiological rest. An example will best show my meaning. Immediately after an injury the effusions into the tissues may, by their presence, interfere with the normal blood current through the part. At a later date these effusions are replaced by organised material which will also act in the same way. The nerve equilibrium will also be altered. The part will then be, from the vascular and nervous side, in a state of physiological unrest, and this unrest will be intensified by prolonged mechanical rest, because, unless there is a normal blood current, the effusions and fibrous material will not be removed. It is therefore necessary that, while we maintain mechanical rest after a part is injured, we should at the same time adopt some means to remove these products. It is here that massage is so valuable; lightly applied it has a marked soothing influence on the nerve disturbance; more strongly, though still gently applied, it will get rid of the effusions by causing a temporary congestion and free flow of blood through the part; still more strongly applied, it breaks down fibrous adhesions and gets rid of the pain felt in certain movements of the limb. While the massage interferes with the mechanical rest, it acts directly in relieving the physiological unrest. Experience alone will tell how far we can go with massage in order to attain the one object—the physiological rest—while at the same time we avoid doing harm by its over-use by interfering with the mechanical rest. In acute sprains and strains it may be begun at once, gently night and morning, using elastic pressure with wadding and a flannel bandage in the intervals of the massage. In sub-acute cases it may be used more freely, wearing an elastic bandage in the intervals, along with limited use of the injured limb. In chronic cases, which are non-tuberculous, adhesions may be freely broken down, often giving immediate relief after months of partial impairment of usefulness.

I am also strongly of opinion that in fractures near joints, as in Colles's and Pott's fracture, massage may with advantage be begun within a week, with the result that while the repair of the broken bone is in no way interfered with (I rather think it is aided), the limb is a useful one at a much earlier period than is the case if, as in the orthodox treatment, the limb is kept absolutely quiet for three or four weeks. If we think only of the broken bone and forget the injury to the surrounding soft parts, the result is a stiff and useless limb, which will for a long time be a source of discomfort and helplessness to the individual. It is a question exercising my mind whether we should not apply gentle massage in all fractures, as a matter of routine practice, so long as we can do so without displacing or causing movement between the broken fragments of the bone. The use of extension during the massage applied to the limb beyond renders this method much more feasible than it formerly was when we depended entirely on splints applied at the seat of fracture commanding the joints above and below. It is interesting to note in this connection that no fractures heal more kindly and quickly than broken ribs, in which it may truly be said that during the whole process of cure the act of breathing is keeping up a constant gentle movement, a nature's massage, which in no way interferes with the union of the broken bone.

In breaking down adhesions in old standing cases of fracture, sprain, or strain, one must act in a decided manner. Their presence is associated with limited movement, pain on movement, or pain on pressure, and the use of firmly applied rotatory massage, or the sudden stretching of the tissues which are matted together, often gives immediate and lasting relief.

In the case of nerve stretching in sciatica, the cases which are benefited are, in my opinion, those which may be called trade sciaticas, due to some special position adopted in the special trade pressing on and irritating the sciatic nerve.

You freely stretch the nerve, but do not interfere in any way with the sensory and motor functions, and the pain is relieved by breaking down the fibrous adhesions in the nerve sheath and among the nerve fibrils. May I say in passing that the operation is sometimes a source of psychical unrest to the operating surgeon if he does not easily find the nerve? This unrest is avoided if, in operating, the patient lying on his face, the surgeon will stand on the opposite side to the limb to be operated upon. If he then makes an incision over the nerve at the lower border of the gluteus maximus large enough to enable him to introduce his forefinger, which, using as a hook, he draws towards the middle line of the patient, he will at once find the nerve lying external to the muscles arising from the tuber ischii.

New lamps may have been expected of me to-day; if so, my hearers have been disappointed. "Let us make a stand on the ancient ways, and then look about us and discover what is the right and straight way, and so walk in it." Bacon was fond of quoting this passage, and it has been my motto. I have taken my stand on an ancient way; I have tried to polish and refill an old lamp.

James Hinton, another of my heroes, in one of his letters, writes: "Let me advise just once. I don't like an adviser much; but just this one thing—be reverent where you are ignorant, and attach no weight at all to your naturally feeling sure. We almost always feel sure wrongly—it is our own fate, it is our very being." The speaker to-day may be too sure, and may place too much reliance on rest as the most powerful therapeutic agent in surgical practice, but he can assure you that he has had Hinton's words constantly in his mind as he spoke, and what he has said is offered to this audience in the same spirit in which they were written by that philosophic surgeon. I began with a sentence from Hinton; I end with one from Hinton. These men had something in common. Hinton taught rest; Hinton sought it. In one of his last letters he writes these sad words: "I have tried for too much, and failed; but yet, perhaps, in that my failure God is giving me more than even I tried for. He has opened my eyes, at least a little, though I am blind and foolish still, no doubt. I will try and be wiser and look more, and care more what others feel." Strange words from one who spent his whole life for the good of others.

At a time fertile in unrest in religion, politics, and surgery, in the county in which Gilbert White spent his days, in the county in which he wrote one of the most restful—I had almost said *the* most restful—book I know, rest as a thesis is perhaps not altogether out of place, especially when I remember that to many of us this meeting is our annual holiday, our resting stage, and still more especially when I remember that we are enjoying the generous hospitality of the inhabitants of one of the main resting places in this country, where so many get that rest which enables them to go back to work with energies renewed and restored by the fresh air and restfulness of one of the most attractive rest resorts in Great Britain.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OBSTETRICS.

At the Annual Meeting of the British Medical Association, held in Bournemouth, July, 1891.

By WILLIAM J. SMYLY, M.D.,

Master of the Rotunda Hospital, Dublin.

GENTLEMEN,—My first pleasing duty is to thank the Council for the honour they have conferred upon me in appointing me President of this Section. At the same time, I do not flatter myself that this selection has been made because of any peculiar fitness on my part to fill such an important post, but rather as a token of esteem for that great institution over which I have the good fortune to preside. The reputation of the Rotunda Hospital is due, I believe, not so much to its being the oldest and largest institution of its kind in these countries, but to the number of pupils which it attracts and sends forth annually to all parts of the world. The institution consists of four departments, and