SURGICAL IMPRESSIONS, THE RESULT OF A FLYING VISIT TO SOME AMERICAN HOSPITALS.

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Having recently spent eighteen days in America, visited seven Hospitals, and seen several surgeons, I think the relation of some of my experiences may interest certain readers :—

In crossing the Atlantic, I was fortunate in meeting Dr. Draper, Physician to Roosvelt Hospital, and Dr. Kelly, Gynæcologist to the Johns Hopkins Hospital at Baltimore, who were returning after a holiday in Europe. Armed with introductions from these gentlemen, I was enabled in a short time to see a good deal of surgical work, and met with a very agreeable reception. An introduction is however, not essential. The American Surgeon is a good fellow and it will be the Britisher's own fault if he cannot get along with him.

I arrived too late to attend the Washington Medical Congress, where the attendance of several distinguished British Surgeons (Professor Chiene among them) at the meetings, was much appreciated.

The first hospital I visited was the Roosvelt in New York, with about 250 beds. This hospital is an excellent one, but cramped for ground space, and not built in accordance with the latest views on hospital construction. It will soon, however, for the building is nearly completed, be possessed of the finest operating theatres in the world, created at a cost of £30,000. The sum was left by a wealthy benefactor with the express stipulation that the whole of it should be expended on this object. The area is to be wholly marble, and the difficulty of disposing of so much money is being met satisfactorily by making it quite an extensive building. There are to be isolated ward-rooms at the top ; the operating-room, porter, and nurse are to have separate quarters there. Photographic, bacteriological, and pathological rooms are to be provided, and a number of special rooms are to be set apart for instrument sterilizing, and disinfecting apparatus, dressings and the special appliances for preparing them, and consulting and other rooms for the staffs.

In the hospital, among several interesting cases I noticed a a boy who had recovered after an operation for perforating ulcer of the vermiform appendix, with general peritonitis. The abdomen had been opened and cleansed and the vermiform appendix removed by Dr. Hartley. This was the only case known to have recovered after such a lesion in New York. Another youth was recovering after an operation for intestinal obstruction, due to a band and adhesions ; and the interesting feature in his case was that a year before, he had been laparotomized for tubercular peritonitis.

Dr. M'Burney had several cases on which he had performed an operation of his own for the radical cure of hernia. He ligatures the sac at its neck, removes it, slits up the whole length of the canal and the skin covering it, sutures the upper skin margin to the conjoined tendon, the lower to pouparts ligament, draws the inverted skin margins towards each other by deep sutures, and packs the resulting ditch with dressings from the bottom till the wound is healed. The object is to secure a firm fibrous barrier against the descent of another hernia. The large gash, held by button sutures, looks formidable, but the results are said to be excellent ; and I had the opportunity of examining a young man who turned up three months after operation, meanwhile having been at work, and

in him the site of operation appeared to be much the strongest and most resistent part of a strong abdominal wall.

The genito-urinary cases are kept in a separate ward and have male attendants. A considerable number of buboes were under treatment during my visit, and judging by what I saw, I think that it would be fair to assume bubo in America must be a much more serious disease than with us. It is the rule to dissect out all the infected glands and to remove all infiltrated skin. The result necessarily is in some cases, a huge granulating surface in the groin. One man I saw had the misfortune to have the glands and skin on both sides affected, and when seen by me, had a granulating area on each side quite the size of my outspread hand. The same method was adopted in Vienna, when I was a student in 1878.

There were several cases of urethral stricture under treatment, and I was surprised to learn that all strictures are dealt with by internal urethrotomy. Those in the penile portion are cut only, those behind are cut and in addition the bladder is drained through the perineum. M'Burney has invented an ingenious instrument for making a small perineal opening just large enough to admit a drainage tube, instead of the larger incision necessary when the bladder is drained in the ordinary way.

The bougies used in the after-treatment are terrible looking weapons, and "bougie day" did not not appear to be anticipated by the patients with feelings of unmixed satisfaction. Surgical principles are not elastic enough to allow of such a radical difference of opinion and practice, as I saw there, and see with us. If they are right, we are wrong.

I had the opportunity of examining some cases recovered after operations for the removal of malignant growths. The operative treatment adopted is much more radical, than is the rule with us—*e.g.*, on an ordinary case of scirrhus of the mamma it is usual to remove a large area of skin, covering and surrounding the growth, to take away the pectoralis major, divide the pectoralis minor and dissect out from the axilla everything except vessels and nerves. The skin gap is filled up by a Theirsch's graft, an excellent method and sufficiently used here. I had the opportunity of seeing that the usefulness of the arm was but little impaired by the loss of the pectoralis major.

In cancer of the tongue, an incision is made through the centre of the lower lip, down through the middle line of the chin and neck to the Hyoid bone. A second incision crosses this, running along the lower edge of the body of the jaw from one facial artery to the opposite. The flaps so marked out under the chin are reflected, the glands dissected out, and the lingual arteries tied. The lower jaw is now sawn through in the middle line and the floor of the mouth and tongue removed. In one case I think a patient of Dr. Halsted's of Baltimore, the upper part of the larynx and a considerable portion of the pharynx had been removed in addition, and a year after the patient was in excellent condition and free from recurrence.

In all operations the most strict aseptic and antiseptic precautions were used here as in all other hospitals I visited, the operator, his assistants, and the operation-room nurse, all wore special clothing; but I will enter more fully into detail on this point later in connexion with the Johns Hopkins Hospital at Baltimore.

Ether was the invariable anæsthetic. It was administered on a simple stiff cone covered by a towel. At Boston it was given on a large, thick cone-shaped sponge, without accessories of any sort,—a safe, efficacious, cleanly, and simple method. Chloroform is mostly regarded as unsafe, and ether is in general use.

The catgut for ligatures was prepared here in a simple way. It looked well and was satisfactory when tested clinically and bacteriologically. The gut, bought dry, and unprepared was first put into ether from 2 to 4 hours, depending upon its thickness, then into 1 to 100 corrosive lotion for the same time, and from this into alcohol, where it was permanently kept till required for use. All instruments were sterilized before use in a special hot-air or steam sterilizer.

Hagedorn's needle and needle-holder were used for the introduction of sutures, and a needle-holder had two arguments in its favour, first, convenience; and, second it was more readily and surely sterilized than fingers. A large number of sutures were used in wounds. Tier upon tier of catgut sutures held the deeper structures in apposition until the sides of the wound were so closely opposed that there was no space for, and no need of drainage. Cheap sponges made use of only once, were employed during operation. The dressings were gutta-percha protective, dipped in weak corrosive lotion, and cut into small patches, next the wound, and either sterilized gauze wool or corrosive gauze and wool heaped outside of this, and retained by an ordinary roller bandage.

Bellevue.—Bellevue is an old fashioned large hospital (800 beds), with a medical school in its grounds. There I saw a Laparotomy performed by Dr. Polk, Gynæcologist to the hospital. The operation theatre is a very large one, much resembling the theatre of the old Edinburgh infirmary in its arrangements and appearance. From 150 to 200 students were present, and waited comparatively quietly for Dr. Polk and the patient.

On Dr. Polk's arrival he was greeted with enthusiastic cheers, for he had just returned from a holiday in Europe. The patient was immediately wheeled in on a couch, under the influence of ether, and her case briefly discussed. She was then stripped and placed on a low short operating table, only long enough to hold her body. The legs rested on a stool.

The operator explained that he had brought her unprepared to shew the methods adopted preliminary to operating, and an assistant proceeded to smear the abdomen with an alcoholic solution of soap, and with the vigorous use of a nail brush and hot water, soon produced an abundant lather. The pubis was now shaved with a razor, and the lather washed off by pouring a hot solution of corrosive sublimate from a jug over the abdomen. Whilst the abdomen was being attended to by one assistant, a second was cleansing the vulval orifice and interior of

the vagina by directing the flow of lotion over and into these parts by his hand and fingers. The cleansing process finished, the patient was entirely covered by antiseptic moist towels, excepting a portion of the abdominal wall of parallelogram shape, reaching from the umbilicus to the pubis. Dr. Polk and his assistants, having thoroughly washed and disinfected, got into their respective places. The former seated himself at the lower end of the table, between the thighs of the patient, with a leg on either side of him, and his abdomen resting against the patient's perineum. This he said was Martin's (Berlin) position, and had many advantages. An assistant stood on each side of the patient ready to help the operator. A variety of matters were discussed and explained during the proceedings and an occasional halt made when any particular point required emphasizing. The operator, taking a long bladed history and commencing the incision just below the umbilicus, with one skilful sweep cut through all the structures at once, down to either fascia transversalis or peritoneum, for the next step was to seize the tissues at the bottom of the wound on either side with two pairs of artery forceps, between which a nick was made, opening the peritoneum. The finger was now introduced and the peritoneum slit up the lengths of the wound. The uterus and appendages were then drawn forward, the extent of disease, a double hydrosalpinx ascertained, and the operation completed by the removal of the diseased appendages, in the most approved fashion.

I have not yet shaken off a feeling of being in sacred ground when my hand is in the peritoneal cavity, and it was somewhat startling to me to see the unceremonious way in which this operation was performed at Bellevue. The impression conveyed to my mind was that the operation was as exciting to the operator as the operation of trimming the nails is to an ordinary mortal, who is occupied in conversation whilst doing it, and does not feel the least need of hurrying over the performance.

I have never seen an operation more skilfully performed, but the advantages of the position adopted would have to be very clear, before a British Surgeon could be persuaded to adopt it. It is not an elegant one.

The New York City Hospital.—This is a very handsome building, outside and in. It is built on the pavilion principle, and each individual ward is a model of what a perfect hospital ward should be. Unfortunately it has been built on a limited space, and is five stories high with a very limited interval between each block. The consequence is, that the natural lighting and ventilation of the lower wards especially is considerably interfered with.

Dr. Weir, one of the Surgeons to the hospital, kindly conducted me round, and I had the opportunity after the visit of seeing Dr. L. A. Stimson excise the vermiform appendix, for perforating ulcer and peritonitis. The patient was a young man of about 18, who, six months before had an attack of perityphlitis, from which he recovered under medical treatment. He was now suffering from a relapse with urgent symptoms and though his abdomen was much swollen and tender, a large resisting mass could be felt in his right iliac fossa. An incision about 6 inches long was made in the right linea semilunaris, and a quantity of fœtid pus, welled up as soon as the peritoneum was opened. On further opening the peritoneum, it was seen that the pus was well localized and shut in by adherent coils of intestine, with the exception of a small place at the upper part, where a communication might possibly exist, with the general peritoneal cavity. The pus was being carefully sponged out with small sponges in large forceps, wrung out of 1 to 1000 corrosive lotion, particular care being taken not to disturb any of the adhesions towards the cavity of the abdomen. The vermiform appendix was then seen projecting from the end of the cœcum into the cavity like a thick reddened spur, and after tying and dividing its mesentery it was ligatured at its base and removed close to the cœcum. The exposed interior of the divided appendix was then touched with pure carbolic acid, and afterwards seared with the point of a thermo-cautery. When all blood and pus had been cleared away by sponging, the pus cavity was gently packed with strips of iodoform gauze all round the stump of the appendix. The wound was sutured and the ends of the gauze strips left projecting through a small gap, to be taken away later, when further adhesions had made it safe to do so.

To see this operation was a great treat. The consummate skill with which it was performed, the careful attention to every detail in the performance, and the scientific way in which possible accidents were provided for, ensured success, if success was possible.

The appendix was opened in my presence, and there was near the end, an ulcer about the size of a threepenny bit, which had perforated near its centre at one very minute point.

During my visit, I saw at least 5 cases in which the appendix had been removed for similar conditions. The only deduction I can make is, that appendicitis is more common in America than in Europe.

When discussing the condition with Dr. Hartley, Surgeon to Bellevue Hospital, I mentioned that in 3 cases, at least, I had opened a perityphlitic abscess with good results, immediate and remote, so far as I knew. He said the appendix was always removed in America, in such conditions when it was possible to find it, if it was not, relapse was not infrequent. In proof of his statement he shewed me a boy whose appendix had been removed a few days before, and his history was that a few months ago an abscess had been opened after a severe illness and healed; he got quite well, had a relapse, and had now been admitted a second time with recurrence of similar symptoms, and had his diseased appendix excised.

The Johns Hopkins Hospital, at Baltimore, on its completion, will be the most perfect large hospital in the world. It will be double its present size, and will then have 400 beds. Possibly this statement may give the impression that it appears unfinished at present. This is not the case. Everything, so far as it goes, is complete, and everything that medi-

cal or surgical brain could wish for and think of, is there. The appointments on the staff are the best in all America, for they secure to the fortunate possessors, an income of £1000 a year, with no restrictions whatever. Could any conditions be better calculated to secure for the citizens of Baltimore the best medical services?

Dr. Hurd, Superintendent of the hospital, shewed me round. He had the whole working of the hospital at his finger ends, and appeared to know all that was going on equally well, in every department, medical, surgical, gynœcological, pathological, and bacteriological. He knew every instrument, recent and late, and could explain its advantages and disadvantages; every dressing new and old, he had considered, and what things were necessary, good, and indifferent in the hospital, he was clear in pointing out.

The out-patient department was the most perfect working arrangement I have seen. No time was lost, and with very little trouble a good record of each case was kept.

There is a good opportunity at Baltimore, as at Liverpool, of comparing the circular ward (or more correctly at Baltimore octagonal) with pavilion wards, as each hospital has wards on both systems. I could get no expression of opinion at either Baltimore or Liverpool, as to which was considered best, except that Dr. Hurd told me that patients preferred the circular, as feeling more private, from the central pillar hiding one-third of the ward from the remaining two-thirds, and that nurses liked the ordinary wards best for the opposite reason—that they could see all that was going on in the ward, from any one part of it.

My own feeling—after seeing Antwerp Circular Hospital, Johns Hopkins, and Liverpool—is in favour of the Circular ward. After the first strange appearance has worn off, it is not difficult to see that on a limited ground space, ventilation can be more efficiently secured, an aspect of such prime importance in pavilion wards were those where the northern frontage always appear colder and darker, may in the circular be almost neglected.

The private wards at Johns Hopkins Hospital are so well patronised, that last year they produced an income of £8000 for the hospital. Nearly all the public hospitals in America have private apartments attached for paying patients, who are taken in at fees ranging from £2 to £10 a week; and private hospitals are much more common than with us, as it is fully recognised that a patient's chance of recovery, especially in surgical cases, is much better in properly equipped institutions than at home.

The pathological and bacteriological laboratories form a part of the building; and though this arrangement was made temporarily, it has been found to work so satisfactorily that it is now agreed that they shall remain permanently.

After going round the hospital with Dr. Hurd, I accompanied Dr. Halsted through the surgical wards. There was a dearth of interesting cases, but what I did see was novel and good.

Dr. Halsted has written on the "Treatment of Wounds, with special reference to the value of Blood Clot, in the management of Dead Spaces" and shewed me an interesting case bearing on this. A middle-aged man had necrosis of the lower end of the femur, for which he had already undergone three unsuccessful operations in good hospitals, during an illness extending over 25 years. Dr. Halsted dissected away all tissues, and thoroughly scraped out a large cavity in the lower end of the femur. Taking the view that this large cavity could not heal, he cut down on the anterior part of the femur, and removed an elongated portion of the middle of the bone. opening up the cavity from this part. He transplanted into the whole a flap of the vastus internus muscle, and this, together with blood clot, filled the cavity completely. An aseptic dressing completed the proceeding; and at my visit a few weeks afterwards, the leg was healed without a trace of suppuration.

I saw also a novel method for the radical cure of Hernia, which was said to be giving excellent results. Dr. Halsted's operation is based on the opinion, that the presence of the spermatic cord in the inguinal canal is an important factor in the causation of hernia, and the prevention of a radical cure. He consequently makes a new passage for the spermatic cord in the abdominal wall higher up than the internal ring. The incision begins at the anterior superior iliac spine, and ends internal to the inner pillar of the external abdominal ring; dividing skin, external oblique aponeurosis, internal oblique the part of transversalis muscle exposed, and traversalis fascia, the length of the skin incision. The spermatic cord is then separated to the upper level of the internal ring. The sac is isolated and drawn forward with the exposed peritoneum through the wound. The opposed peritoneal surfaces are then brought together along the line of incision by a series of quilted sutures and the redundant peritoneum and sac clipped away close to the line of sutures. The cord is now brought through between the muscles near the upper end of the wound, and the divided muscles are brought into apposition by a second row of quilted sutures. The aponeurosis of the external oblique may be included in this or separately sutured. Finally, the skin wound is carefully sutured, leaving the spermatic cord between skin and aponeurosis. No drainage tube is required.

I next went to Dr. Howard A Kelly's gynæcological clinic, one of the most interesting medical sights in America. Dr. Kelly is a young man, only 35, and has attained his present position solely by his own work and ability, which count, I fancy more in the new than in the old country. His results in abdominal operations can scarcely be surpassed, and I was much impressed by the thoroughness of all his work. He has a special theatre and wards of his own, and has discussed those and his method of working, in full in the Johns Hopkins Hospital Reports for 1890. The combination of asepsis and antisepsis described is such as is employed at most of the surgical clinics, with a strictness not frequently to be seen in this country, and I have purposely left distinct mention of this important subject till I could do it full justice.

The following Extracts from Dr. Kelly's report shew where and how his surgical work is carried on :—" The Gynæcological operating-room of the Johns Hopkins Hospital is in a separate building, in the centre of the private gynæcological ward. Clustered around it are thirteen private bedrooms for patients. Bathroom, water closets and sink, are all located in the remote part of the wing, projecting from the main building. The operating room faces the west, and is lighted by three long windows.

Its floor is 16 by 20 feet, and the height of the wall 14 feet. The walls have hard soap stone finish, allowing the free use of water in cleansing, and by their light color diffusing the sunlight which enters the three western windows. All angles and corners in the whole building are rounded off, preventing accumulation of dirt, and greatly facilitating the cleansing. The floor is laid with a light-colored, hard, encaustic germantile, closely fitted, absolutely impervious to water and blood. It slopes to the discharge-pipe beneath the wash-basin, which carries off the water in mopping after operations. The hot and cold water used for the preliminary washing of hands and instruments is supplied by five pairs of faucets—4 over porcelain hand basins set in a marble slab, and two large faucets over a porcelain lined sink, 24 by 48 inches, used for washing instruments and glassware. All pipes are open to view, there are no concealed nooks or corners in any part of the room. There is absolutely no dead space. All of the water is either distilled or filtered. The tap water has already been filtered in the boiler vault by a Loomiss's filter and yields from the cold faucet, but 5—6 colonies of non-pathogenic bacteria to the cubic centimetre, in place of 35 in the non-filtered water. The hot water thus tapped is sterile (Dr. Abbott's Report).

" *Treatment of Instruments.*—Instruments are immersed in distilled water during an operation and are never allowed to become dry afterwards until thoroughly cleaned. After an operation they are at once washed with hot water and brown soap from 2 to 3 times, and then dried very carefully and put away in the case. Immediately before using the instruments at an operation, they are sterilized by steam in a newly devised Rohrbeck oven, at 100 C. (212 F.) for a half-hour, when by turning a ventilator the steam is shut off, and they are automatically dried before being removed from the oven. From the oven they are at once transferred to the glass trays and basins in which they lie throughout the operation immersed in hot distilled water.

The Patient.—The patient is prepared for an abdominal operation by daily baths for 3 or 4 days, or a longer period if the opportunities afford it, and the condition of the skin requires it ; in the bath the nurse carefully scrubs the skin of the abdomen thoroughly cleaning out the umbilicus. In addition to this the patient receives twice daily a vaginal douche of 1—3000 bichloride of mercury, or a 3 per cent. solution of carbolic acid. For abdominal hysterectomy the technique of vaginal cleanliness, in washing out with soap and water and douching frequently is more aggressive and thorough. The bowels are always freely opened and the diet limited to soft, easily digested food, for from three days to a week before hand. An hour before the operation she receives one-fourth of a grain of Morphia and 30 grains of bismuth. When lifted on to the operating table the abdomen is again thoroughly cleansed with soap and hot water, and the genital hair is shaved off. This is followed by a douching with bichloride (1—1000), and again with water to remove the bichloride. The field is then aseptic and ready for operation.

" *The gauze, towels, sponges, and ligatures,* used in all operations are disinfected as follows :—The gauze is common cheese cloth, a yard wide, costing 5 cents per yard. It is first cut in lengths of 3 yards, then boiled in a solution of washing soda, two drachms to the gallon, for twenty minutes ; after this it is thoroughly cleansed by washing in four distinct hot distilled waters. Then it is wrung out and laid in a bichloride of mercury solution (1—500) for one hour, and after this transferred to alcohol, or to a 3 per cent carbolic solution for preservation. Just before use it is lifted out of a large salt-mouthed jar, and wrung out and laid in distilled water. The towels are soaked for twenty-four hours, in 1—1000, bichloride solution and then wrung out and put in a large jar of 3 per cent. carbolic solution. The sponges are bought by the pound, costing from 1 to 2 cents a piece. They are brown and gritty in the package, requiring much careful handling to render them safe for use. They are first laid in a dry cloth and pounded lightly to break up and loosen and remove the coarser grit. They are next immersed in a solution of hydrochloric acid (commercial), one drachm to one pint and left 24 hours. They are taken from this and washed in from 12 to 16 hot waters until they no longer give the water a yellowish color ; they are carefully handled all this time to separate all lumps and spicula, which can be dectected by eyes or fingers.

They are next transferred to a 1—1000 bichloride solution for twelve hours, and from this transferred to a 3 per cent watery solution of carbolic acid for preservation.

" The *Ligatures* and *Sutures* are of twisted surgeon's silk, bought in skeins, sizes 1—4. They are freshly prepared every week. The skeins are opened and laid in boiling water for twenty minutes. They are next immersed in a 1—3000 bichloride solution for three hours and transferred to alcohol for preservation on long spools. Just before the operation the cover of the dish is removed and the necessary amount of ligature pulled out and cut off. Any ligatures left over after a laparatomy, are transferred to another glass dish and used for perineal and vagnial operations,

" *Catgut.*—Is bought raw from the instrument maker and prepared as follows :—It is first immersed in a watery bichloride solution (1—1000) for twenty minutes, and then transferred to absolute alcohol for one hour. It is then laid in oil of juniper wood for forty eight hours, and transferred back to alcohol for preservation. I do not feel safe in using strands of catgut of more than 1 m.m. in thickness.

" *Silk-worm gut.*—Is bought in bunches, the curly ends are cut off, and the straight pieces laid in absolute alcohol for preservation.

"*Operator and Assistants.*—The toilet of all persons in the room is one of the most important features. Visitors are required to put on large linen wrappers completely covering their street clothes. Nurses wear clean washed dresses on their costumes. Operator and assistants remove coat, vest, starched shirt, trousers, and shoes, donning a freshly washed, white linen suit, with short sleeves, and white canvas shoes, with ndia-rubber soles. They are thus dressed in clean white clothing from head to feet. Before touching instruments, ligatures, etc., the operator and his assistants upon entering the room in their white suits, turn to the wash-basins and there spend at least ten minutes washing hands, finger-nails and forearms, with brown (oleine) soap and warm water and a moderately stiff scrubbing brush. The thorough use of a good brush on short nails will do all that is necessary. After washing thoroughly in soap and water the hands are next immersed in a saturated solution of permanganate of potash, and held there until they are uniformly deeply stained, from which they are transferred to a saturated solution of oxalic acid, which removes the stain in one minute. They are then dipped in plain water, and finally laid in a bath of perchloride of mercury (1—1000), for a measured minute. The hands and arms are thus rendered clean and aseptic. It will often happen that it is necessary after this preparation to touch parts of the patient which are not aseptic, as in arranging her conveniently on the table, or various articles not assuredly aseptic may be handled by accident or otherwise. After such contamination a brief but careful scrubbing with the soap and water followed by a brief plunge into the bichloride solution will render the hands once more aseptic. *I attach the utmost importance to the thoroughness of the first washing*, if this is efficient, the dirt of twenty-four hours is removed and any subsequent superficial contamination, may readily be removed with less pains.

"*The Operation.*—With such preliminary antiseptic preparations the operation is begun under aseptic conditions. *Throughout the operation no antiseptic solutions are used*, if the intestines need washing or the abdomen douching out, distilled water at 110°F. is used. For sponges, instruments, ligatures, or cleansing the hands from time to time, nothing but boiled distilled water is used.

"*The field of operation.*—Is next shut off from the rest of the body, the table, etc., in the following manner. The patient lies on the operating table, which is as long as the body from the head to the knees, and the feet rest on a step 18 inches below the level of the table, the hips lie within the ovariotomy pads. The night gown is pulled up over the chest. After the preliminary shaving and disinfection, one of the prepared towels is laid across the upper part of the thighs over a piece of rubber sheeting covering the legs. Another prepared towel is laid across the upper part of the abdomen and lower thorax. Over both of these towels and the bare abdomen between them, a piece of prepared gauze is laid, 29 inches long, 22 inches broad. The gauze is slit over the linea alba from the umbilicus to pubis, the slit pulled open, and through this opening thus guarded on all sides the abdominal operation is performed. *It is the constant duty of the operator to have a lively consciousness of what the assistants are doing with their hands and in case of any transgression on their part to send them to the wash basin.*

"*The dressings.*—The dressings for the wound in abdominal surgery are as simple as possible. If a drainage tube is used a loose plug of the sterilized gauze is dropped to the bottom, to act as a capillary drain.

"The wound is thickly covered with a dry powder of iodoform and boracic acid (1—7) well mixed, and this is not disturbed until the stitches are removed from the abdominal wall on the eighth day. A thin layer of bichloride cotton is laid directly on the wound, covered with powder, and over this a wide roll of plain absorbent cotton, 1½ inches thick. The whole dressing is held in place by an imbricated many tailed flannel or muslin bandage. If the bandage is removed at any time during the first week, fresh powder is sprinkled over the line of incision.

"The nurse catheterizes the patient only if she is unable to pass her own urine, first wiping of secretions from the mouth of the urethra and then sprinkling some of the iodoform and boracic acid powder within the vulvar orifice, after each catheterization."

Such are Dr. Kelly's directions, and they give me the impression of carrying out surgical principles, according to our present lights, in a practical manner, and one approaching perfection. American Surgeons do not forget that all recent advances in wound treatment originated with Sir Joseph Lister, and admit without hesitation that his researches have revolutionized surgery.

They claim that their hospitals and nurses are better than ours, and the first I cannot deny. The American nurse, though a copy—in costume, manners, everything—of the Nightingale Sister, but to my mind there is no nurse so perfect, as a good English one.

Before leaving the subject of the Johns Hopkins Hospital, it will be well to mention that it has the reputation in America as a training school for nurses, efforts being made by means of lectures to give them a sufficient amount of information. The syllabus of Lectures includes—elementary Anatomy and Physiology, Hygiene, with special reference to ventilation, heating and drainage, Bacteriology, especially in its application to Surgery and Medical practice, all the Surgery required to ensure a certain amount of appreciation of what is being done, and enough of Medicine to make the reasons for certain lines of treatment intelligible. A satisfactory examination must be passed on the subjects included in the lectures and on cookery—theoretical and practical—before a certificate of efficiency is given.

Is this too much, or are we doing too little for our nurses? I think the fault is on our side. The nurses are interested in such work for its own sake, and the smattering knowledge so gained, helps them to take a more intelligent interest in surgical methods, and naturally increases their efficiency.

The City Hospital at Cincinatti is an old building but does a great deal of good and useful work. I spent a pleasant and profitable morning with Dr. Conner, surgeon to the hospital who shewed me several simple fractures put up in plaster of Paris bandages. Here, as in most American hospitals, it is the rule to put the limb up at once in a plaster bandage over a thick layer of cotton wool. About the end of the first week, all being well, the bandage is taken off, the position of the limb examined, and another bandage firmly applied. This is left on for the remaining 5 or 6 weeks treatment. This practice also obtains in all the German hospitals I have visited, but is adopted only partially in the British Islands. Dr. Conner told me there was now a rage on the radical cure of hernia by different methods, but that he thought possibly ligature of the neck of the sac and its removal, were sufficient and as satisfactory in result as more elaborate proceedings.

He also took me to a large Catholic Hospital in Cincinatti, with over 200 beds. It is managed by Sisters of Mercy, and there is no resident surgeon. The wards are small—in fact it is a large ordinary house, the private rooms of which have been converted into small wards. It is remarkably clean and comfortable, and has an air of homeliness about it, which is wanting in the ordinary hospital ward. Is this not the model hospital of the future ?

In *Chicago* I saw Dr. Senn, who has recently removed there from Milwaukee.

I had no opportunity of seeing him operate, but learned from him in conversation that he had given up the use of dry decalcified bone plates, as originally recommended by him, for, in one case of gastro-enterostomy, the patient vomited the plates, and in a second case the plates had escaped from the abdominal wound. Both patients recovered, but in spite of this he now prefers plates kept in a mixture of equal parts of spirits, glycerine, and water.

The Massachussetts General Hospital, Boston.—Owing to the kindness of an old Vienna friend, Dr. Williams, physician to the City Hospital, I spent a most pleasant and profitable morning with the staff, to whom he gave me an introduction. Everything, including hospital, staff, nurses, and all else, is decidedly English at Boston. It seemed none the worse for that.

I first saw Dr. Cabot, Surgeon to the hospital, do an Ovariotomy. The operation was performed in a special theatre, as all laparatomies are at this hospital, which was quite isolated from the main building and had special wards in connection with it, much the same as at Johns Hopkins Hospital.

Worsted quilted in gauze bags, took part of the share in the sponging, though sponges were used too. The case I saw operated on was a tumour of large size, and several vascular adhesions were torn through, so that some blood necessarily got into the abdomen. The majority of surgeons in this country would have washed out that abdomen and drained it. Dr. Cabot did neither. He however, sponged it dry and clean before suturing it. So far as I could judge a reaction had commenced in America against drainage and washing in abdominal surgery, as I several times heard both condemned as mischievious.

Dr. Cabot also shewed me two hysterectomies for fibroid, clamped outside, convalescent, and a bad case of double pyosalpinx doing well, after operation. The results of abdominal surgery in this hospital are excellent as one can well believe, after seeing the care taken of the patients and the strict attention to every detail enforced. In this hospital and at the City Hospital, the general surgeons do all the operative gynæcology, and all over America the general surgeon does a great deal, possibly the greater part of the work. It is settled on the other side of the Atlantic that abdominal surgery at all events, is a branch of surgery, not of gynæcology.

A case of excision of the ankle of Dr. Cabot's interested me. We would call it erasion or arthrectomy for the old formal excision is not what was performed. The ankle joint was opened by a semilunar incision on each side, curving round either malleolus and missing all tendons, vessels and nerves. The astragalus was found diseased, and excised ; for, as Dr. Cabot explained to his class, if any disease at all exists in the astragalus the whole bone must be removed, its defective vascular supply making repair difficult. The os calcis was extensively diseased, but the tubercular foci was scraped and gouged out of it with good hopes of success, for its vascular supply is so good, as to favor healing. The malleoli were left intact, and it was considered fortunate that this could be allowed, as they form an important buttress and support to the foot. Some loosened cartilage was scraped from the ends of the tibia and fibula, and all granulating tissue and infiltrated structure removed. The wound was then filled loosely with iodoform gauze and dressed in the ordinary way. Excision of joints is somewhat of a speciality at Boston. Dr. Scudder has published some excellent results, but all over America this is a common operation, and leaves an excellent and serviceable foot. Sixteen years ago my brilliant revered teacher, Dr. Heron Watson, frequently excised the astragalus in such cases ; since then I had not seen it done, or heard of it again, till now.

In such a case nine out of ten surgeons in this country would have done Syme's amputation, and I ventured to say so in the operating theatre. Imagine my surprise, at being told that if amputation had been necessary, Syme's would not have been the operation selected, that Syme's was the best operation for a wretchedly poor person ; but there were few such, who could not afford a proper artificial limb ; and that where money could be obtained for an artificial substitute, amputation at the lower one-third of the leg was the operation of election. This was said by one of the distinguished Surgeons of the hospital, and all my remarks, even quotations from Mr. Cathcart, failed to make any impression on his opinion.

Bigelow was a great benefactor to the hospital, and his name appears more than once in going round it. An operating chair in the theatre devised by him, is a marvel of complicated ingenuity.

Attached to the operating theatre is a room for examining pathological specimens with a pathologist in attendance.

Within five minutes of the time a tumour is removed, a stained section of it is mounted ready for examination. A fresh piece of the tumour is frozen by means of carbonic acid, an easier and cheaper method than ether, cut and stained in methyl green and if wanted as a permanent specimen, mounted in glycerine. Dr. Mixter has invented an ingenious tumour punch which is in general use in the hospital. It is a canula with sharp internal edges, which in doubtful cases he inserts into the tumour, painlessly under cocaine, and removes a portion of it for examination.

I will conclude this desultory paper with my general impressions. American, much more resembles German than English Surgery. The Germans have an indescribable way of taking possession of an anæsthetized patient, giving an impression that he is entirely their own, and that they mean to do just what they like with him.

German instruments are large, artery forceps like tongs, scissors like sheep shears, retractors like garden rakes.

The German Surgeon is seldom in doubt, and has an excellent embryological, bacteriological, and pathological explanation of all his cases and results. If there is any mistake, something is to blame, not the surgeon.

Then there are other German specialities, such as metal-handled knives, the invariable introduction of needles by a holder, the wearing of special operating apparel, the strict attention to asepsis and antisepsis, and the selection only of such operations as can be performed with deliberation, and in open day-light. All have more or less influenced American surgery.

Results are, after all the test, and on these, judgment must be formed, and from this standpoint my belief is, that if English surgeons do not wish to be overtaken, they must put their best foot foremost.—*Edinburgh Medical Journal.*