

III.—NOTES OF FIVE WEEKS' SURGERY IN THE ROYAL INFIRMARY,
WITH REMARKS ON ANTISEPTIC TREATMENT.

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MR PRESIDENT AND GENTLEMEN, — In the absence of any member of the regular surgical staff of the Royal Infirmary, it becomes the pleasing duty of one or other of the dispensary surgeons to take charge of his wards. In accordance with rule, I was requested by our worthy Superintendent to look after the welfare of the patients in wards 21, 29, and 30 during my friend Dr Dewar's sojourn in the Highlands. The three wards are situated on the top storey of the new Surgical Hospital, are all well ventilated, and thoroughly clean. Ward 21 is the chronic male ward, and contains 19 beds; ward 29 is the male accident ward, which, along with two side rooms, gives accommodation to 17 patients; while 30 is reserved for females and children, and admits 15 patients,—in all, 51 beds. With your permission, we shall take the patients in the female ward first in order.

CASE I.—Mrs M'C., aged 27 years, of a robust constitution, and five months pregnant, was admitted at 11 P.M., on the night of Saturday, 14th September, 1872. A short time previously, while standing at the Cross, she was knocked down by an omnibus, one or more wheels of which passed over her legs. A large lacerated and contused wound occupies the front and inner aspect of left lower limb from knee to ankle, while here and there fragments of bone are protruding, the wheel having apparently passed along the limb, not across it; the right leg, again, about its middle third, and to that extent, is found to be flattened like a cake, and yields, to the touch, a sensation as if the bones were crushed into small fragments like egg shells. There is a lacerated wound of about two inches in extent on the outer aspect of the injured part; the arteries in both limbs are entire. The

poor woman suffers comparatively little shock, and stoutly persists in refusing to submit to amputation of either limb. She was ordered 6 oz. brandy in the 24 hours, and the fractures were put up as carefully as possible. She steadily refused to submit to operation until the 20th Sept., when she begged to have one or both legs taken off, if we could save her life. Her pulse was now 130, and the left lower extremity, from knee to ankle, was in a sad state from inflammation and sloughing of the tissues. On asking the only two of the surgeons in the house at the time to see patient, one said, "Do not interfere, or you will get the credit of killing the patient," the other gave permission to operate, but without any hope of recovery. At the patient's urgent solicitation, the left limb was taken off at the middle third of the thigh. The tibia was found broken into nine fragments, while the fibula remained entire!

The other limb was put up in a Macintyre splint, from which a piece had been cut opposite the wound, so that the dressing could be changed without moving the fracture. A drainage tube of green silk led from the wound through a hole in the dressing to a cup placed beneath. Perfect consolidation took place. The pulse remained for ten days at 120, and gradually fell to the normal state. The stump healed very well.

CASE II.—Mrs M., aged 50 years, suffering from strangulated femoral hernia in left groin, was admitted on the 23rd September, 1872. Patient states that the swelling first made its appearance two years ago, when lifting a heavy weight, since which period she has been troubled with it less or more. During an attack of vomiting, three days ago, the bowel came down, but she did not think about it, but applied mustard poultices and hot fomentations to relieve the abdominal pain. In the end she had to send for a medical man, who ordered her to the Infirmary. She was put under chloroform, when the taxis was tried, which failing, I operated under the carbolic acid spray. On opening the sac, a knuckle of intestine, of a maroon colour, was found, but no omentum; the stricture was divided, the

bowel returned, and the wound dressed antiseptically. She was put to bed, and ordered to have ice or soda water if thirsty, but no food or medicine. Seven P.M. on 24th, pulse 86; no vomiting since operation; slept last night; ordered beef tea, and the wound was dressed every fourth or fifth day, and kept perfectly antiseptic all through. The pulse never rose above 86, and neither medicine nor stimulant was required. The bowels were not opened until the eighth day after the operation. She was sitting at the ward fire on the 13th October. In this case the sac was dissected from its surrounding attachments, stitched through its neck with carbolized catgut, and cut off close up to the crural ring, in the hope that the cicatrix may prevent the return of the protrusion.

CASE III.—M. E., aged 12 years, admitted 23rd September, 1872. On examination, patient is found to be suffering from a firm, elastic, smooth tumour, about the size and shape of the head of an eight months' child, apparently springing from the head of right fibula. A number of blue veins are observed meandering over its surface. The girl states that about five months ago, she felt a severe pain below right knee, when a small swelling appeared, which has gradually and rapidly increased until her admission to hospital. A consultation was called, when the tumour was pronounced to be osteoid cancer, and amputation above the knee-joint recommended. On the 26th September, the amputation was performed above the knee, and the stump dressed antiseptically. Four weeks after, the wound was all but perfectly healed. The tumour, on being sawn through, was found to present a beautiful example of osteoid cancer, with spicula of bone running through it, resembling the arbor vitæ structure of the cerebellum.

CASE IV.—J. L., aged 6 years, a strumous boy, who has been ailing for two years. At present he is found to be suffering from an abscess in left groin, also from a small open sore over left os calcis, which leads down to a cavity in the bone. The lad was ordered to have cod-liver oil and muriated tincture of iron. On the 24th Sept., the foot was

removed by Syme's method, and the sharp flap carefully mopped with solution of chloride of zinc, and then dressed antiseptically. The case did well. Disease of the os calcis alone appears to me to be an indication of a much deeper constitutional taint than general disease of the tarsal bones. Excision of the bone might have been performed here, but the child was greatly emaciated, and as the after treatment of the excision entails an extremely long confinement to bed, amputation was deemed preferable. Indeed, the propriety of the cutting-out operation, in any case of disease of the heel bone may, I think, be open to question. Patients on whom excision has been performed, as a rule, die early of phthisis, a consummation which a prolonged residence in hospital will not tend to obviate. Moreover, were life spared for a more lengthened period, amputation at the ankle joint would leave a limb probably in every way as useful as the foot with the arch destroyed.

CASE V.—J. J., aged 9 years, admitted on 25th September, 1872. Patient has suffered from pain and swelling in right knee for the last four years. At times better when she gave it rest, at times worse when she took much exercise; latterly she has been confined to bed altogether. The knee is bent at a right angle. Amputation was performed on the 27th above the knee, and the case progressed satisfactorily to a cure.

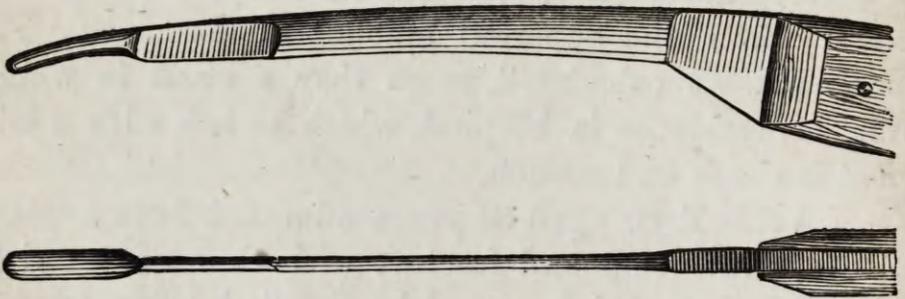
WARD 29—CASE VI.—D. M., aged 22 years, admitted on Friday, the 20th September, 1872. To-day, while at work in a ship-yard, a log of wood fell on his left leg, causing a compound dislocation of the ankle joint. Both bones of the leg protruded outwards—the internal maleolus broken off, and remaining attached to the internal lateral ligament, the foot having its sole turned towards the opposite limb. Mr Buchanan, house surgeon, carefully, but slightly, enlarged the skin wound, flexed the thigh on the pelvis and the leg on the thigh, and easily returned the bones and foot into proper position. The strongest watery solution of carbolic acid (1 to 20) was thrown into the joint plentifully; the foot and half way up the leg carefully dressed with eight-

fold gauze, next the wound, and the splint applied. 21st September.—Next day, the dressing was changed under carbolic acid spray, when a large clot was found filling the ragged wound, and from which a considerable quantity of bloody serum had escaped. The protective green silk was now applied next the wound, (it is not necessary at the first dressing in such a case, or in any case where a profuse discharge may reasonably be expected), gauze was placed over it as before, the limb carefully bandaged with a Scultetus, and placed in a well-padded Macintyre splint. The wound was dressed every third, fourth, or fifth day, as we deemed necessary from the apparent amount of discharge. This man gained, we calculated, more than a stone in weight during his residence in hospital, which he left with a joint perfect in shape and motion.

CASE VII.—T. S., aged 34 years, admitted 20th September, 1872, with compound fracture of both bones of right leg in the middle third, caused by the limb being jammed between two casks of porter. Injected with 1 to 20 carbolic solution, dressed with gauze, Scultetus, and straight side splints. Changed next day, when firm clot is found in wound, and allowed to remain, protective being placed over it, and the gauze as before. 25th.—Dressed again under spray. 29th.—Changed as before. Oct. 5.—Again, and afterwards once a-week. This man's pulse never rose above 80; he did not lose one hour's sleep or one regular meal, and of course no stimulants were required.

CASE VIII.—J. M., aged 31 years, admitted 7th October, 1872. Patient has suffered from rupture for some months back. Two days ago the bowel came down, since which time it could not be returned. He now labours under strangulated oblique inguinal hernia on the right side. Patient vomits, as he says—"What should go the other way;"—complains of pain radiating from the umbilicus—while the tumour itself is tender, with slight redness over its neck, probably from the application of the taxis outside. M. was put under chloroform, and the operation performed under the carbolic spray. Bowel, to the extent of two feet, was found in the sac, and the stricture was

formed by the external ring, a situation at which it is rarely met with in a patient so young—while in old persons and old ruptures it is the common seat of stricture. 8th.—Dressed, looking well, only there was œdema of scrotum which was elevated. 11th.—Changed to-day. œdema nearly gone. 13th. Dressed; œdema gone. 18th.—Wound quite healed; sutures removed. Dismissed on the 26th October. This was my 34th operation for strangulated hernia, and at it, as in the five cases immediately preceding, I used the knife which you see



here; it differs from Sir Astley Cooper's, simply in the blunt pointed part of the knife having a quarter turn given to it, so that the flattened point passes more readily under the stricture, while its breadth flattens and pushes the gut aside as the cutting part of the blade follows. In femoral hernia especially, the stricture is much more easily cut than with the ordinary knife. I have opened the sac in all the cases in which I have been called upon to operate, as being the safest mode for the patient. Although the stricture is usually external to the sac, yet the neck of the sac itself may form the stricture, adventitious bands may remain inside, and, as length of time is not an absolute criterion as to the state of the contents of the sac, but rather the tightness with which the bowel has been caught, you cannot, with certainty, tell when to open the sac, and when to leave it unopened. I have seen the gut safe after a week's strangulation, and in other cases black in a number of hours, the latter especially in femoral ruptures. Besides, after all, it is not the operation which kills the patient, but the delay which has taken place before you see the case. The proper way to act when called to a case of strangulated hernia is,

I apprehend, to explain the nature of the case to your patient, put him or her under chloroform, try the taxis, and failing reduction, be prepared to operate at once. If you have a blush on the skin over the tumour, omit the taxis, and operate immediately, if the patient's strength will admit. It is, in my humble opinion, great folly to waste precious time in administering purgatives and injections, and waiting for their action. The only cases in which delay is at all admissible, are the large, old herniæ, in men advanced in years, in whom the circulation is slow, the stricture at the external ring, and the strangulation rarely very tight, and consequently where there is less risk of gangrene. In such cases, large injections, thrown up, so as to distend the lower bowel, and be ejected immediately, with the application of ice to the tumour, afford a fair prospect of success.

CASE IX.—R. L., aged 19 years, admitted on 25th September, 1872. To-day, while assisting at hoisting a pipe weighing two tons, the crane broke, he was knocked down, and sustained a severe compound comminuted fracture of left leg, which was amputated below the knee. The case progressed, and ended well.

WARD 21. CASE X.—A. M., aged 11 years. Patient has been in hospital for some time, suffering from strumous disease of knee-joint and of foot of same limb. On the 20th September, amputation through the lower third of femur was performed, and the lad was dismissed perfectly well on the 18th October.

CASE XI.—M. M'L., aged 20 years, admitted on September 5th, 1872. Patient has been suffering from disease of the left elbow-joint during the past twelve months. Excision was performed on the 20th September, and the wound dressed in the usual manner. For some weeks the case progressed fairly, but phthisis began to show itself, and some time afterwards Dr Dewar was compelled to amputate the arm. ✓

CASE XII.—J. B., aged 18 years, admitted on September 30th, 1872. Patient has been labouring under disease of left wrist-joint for the last fifteen months, without any

assignable cause for its origin. At present there are three openings on the dorsal aspect of wrist, all leading down to diseased bone. On the 11th October the wrist-joint was excised, according to Butcher's method, which consists in raising a flap from the dorsal aspect of the joint, cutting the extensor tendons, except those of the thumb, removing the carpal bones, and sawing off the ends of the radius and ulna. The cartilages should also be taken off the ends of the metacarpal bones. The wound is allowed to heal with the fingers in a semi-flexed state, while the thumb remains as a moveable opponent to the fingers in their fixed position. The lad left the hospital with the wound nearly healed.

CASE XIII.—W. D., aged 22 years. September, 1872. Patient states that about twelve months ago, while wrestling with one of his companions, he had one of his testicles (the left) severely bruised, but took little notice of the matter at the time of accident. Some time after, the testicle swelled, when a surgeon to whom he applied leeches the part, with a beneficial result, but pain, less or more, still remained, with some swelling. In the month of April last, the pain assumed a throbbing character, when poultices were applied, followed by the bursting of the tumour. It has continued to discharge, while the pain at the upper part of the swelling is still great, at times extreme. At present the scrotum on left side is about the size of the fist, smooth, oblong, and fluctuating in front; behind, the surface is rather irregular, tender to the touch, and having on its outer aspect a small irregular opening, surrounded by a fungating border. A probe introduced by this opening passes upwards and downwards, apparently through the body of the gland. The anterior wall was opened, permitting the escape of 4 oz. of straw-coloured serum. The pain was diminished by the tapping, but increased again as the fluid collected. On the 8th October, the gland was excised, when the testicle proper was found to have been converted into a bag or egg-shaped cyst, with a pyogenic lining. The epididymis was enlarged, and studded with small masses of tuberculous matter. Four

weeks afterwards, the right testicle was removed by Dr Dewar, on account of pain and enlargement of the epididymis; it (the epididymis) was about three times the normal size, and consisted of an encapsuled mass of cheesy tuberculous deposit.

CASE XIV.—J. D., aged 27 years, blacksmith, admitted on the 5th October, 1872. Patient complains of a severe pain in the upper third of the left tibia, which is increased during the night, so that for the past two months he could seldom get a comfortable sleep. D. dates the origin of his complaint ten years back, when he received a kick from a horse below the knee-joint. Patient was at that time confined to bed for a period of six weeks, although the wound was, as the man says, only skin deep. For the last five years the swelling has remained, with the attacks of pain coming at intervals. He has had, on different occasions, incisions made down to the bone, and tried many local remedies, besides which he had taken iodide of potassium for months, but with only temporary benefit. The upper end of the tibia, for a space of three inches, is much enlarged, and feels tender under pressure. There is no history or appearance of syphilis. The case appeared to me to be one of chronic osteitis, either with or without an abscess in the bone, and resembled closely some of the cases for which Sir Benjamin Brodie first trephined the tibia in 1827. On the 19th October, I pierced the bone to the extent of three-quarters of an inch, with a trephine of medium size. No cavity was found, but the tension having been relieved, the pain gradually became less, until it finally ceased altogether, and the man left the hospital well.

The minor cases, such as simple fractures, dislocations, strictures, fistulæ, and ulcers, of which we had the usual numbers, I have not referred to.

The antiseptic mode of treatment was faithfully carried out in all the cases, with the exception of that of Mrs M:C., where there was no hope of saving the limb by any plan of treatment. The advantages obtainable by the antiseptic plan (and by it is meant, not simply dressing with

carbolic acid, because the two modes differ widely from one another), are: (1) increased cleanliness about your patient; (2) absence of unpleasant odour; (3) increased purity of the ward atmosphere; (4) reduction of the discharge to the smallest possible amount, thus harbouring your patient's strength, and avoiding the necessity for stimulants; (5) the great saving of time. After the second dressing, when all goes on as you expect, every fourth day or weekly will suffice for changing your appliances; now the gain to a patient with a compound fracture from any plan of treatment necessitating so little motion during the cure cannot be estimated; and I believe that, when properly carried out, you will rarely or never have an ununited compound fracture, just as certainly as that you may unite all simple fractures, by proper position and perfect rest; (6) and greatest boon of all to the hospital surgeon, is the almost total immunity from erysipelas and pyæmia which the treatment affords. The preceding remarks apply solely to the antiseptic treatment of wounds, as proposed by Mr Lister, and whether you believe in the germ theory or not, you must follow out the treatment exactly as if you did, or you will inevitably fail in obtaining the results you so fondly expect. It is from non-attendance to this simple fact that the carbolic acid treatment fails in the hands of some gentlemen, and from the same cause that others have discarded it, as being no practical improvement. Every change or fancied improvement on the original plan that I have seen practised, has only tended to disappointment, and to destroy belief in the antiseptic treatment, which, when properly carried out, will, in my humble opinion, be yet found to rank second only to chloroform, as a blessing to surgery.
