

Ward (S.B.)

PROGRESS IN  
S U R G E R Y.

PREPARED  
BY  
SAMUEL B. WARD M. D.

[REPRINTED FROM THE NEW YORK MEDICAL JOURNAL, MARCH, 1875.]



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# THE POPULAR SCIENCE MONTHLY,

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Conducted by Prof. E. L. YOUMANS.

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EVER since anæsthetics were introduced, deaths have occasionally been reported from their use; and in some cases—as in operations about the face—their administration is attended with more or less inconvenience.

Dr. Copeland has stated during the past year<sup>2</sup> that he has found the difficulty in respiration, during their inhalation, to be due to the head being thrown so far back that the stylo-hyoid muscles draw the tongue in the same direction, and so close the glottis. This he says may be remedied, whenever it occurs, by simply tilting the head forward and relaxing these muscles, without the necessity of making traction on the tongue with tenaculum or forceps.

In the opinion of Dr. J. Marion Sims, threatened deaths from chloroform or ether narcosis usually, if not always, depend on cerebral anæmia. He therefore proposes, and from experience recommends, in these frightful emergencies, holding the patient up by the feet, and allowing the blood to reach the brain by its own specific gravity.

During the past year an effort has been made to introduce a new method of bringing about insensibility, by the injection of chloral into the veins.

On the 2d of March last, Prof. Oré, of Bordeaux, communicated to the French Academy of Sciences a case in which this had been resorted to. The enormous amount of 340 grains of chloral hydrate was slowly injected into one of the radial veins: in ten minutes profound insensibility was produced; the operation lasted twenty-five minutes; and the patient was easily and rapidly aroused by the interrupted current, having known nothing at all of the operation.

Prof. Oré considers it of great importance that a sieve or filter should be introduced into the syringe, so that no solid particles whatever may enter the vein. From his experience with the method in this and other cases the professor maintained that it should be preferred to chloroform for surgical anæsthesia. From this opinion MM. Verneuil, Duplay, and others, who took part in the discussion of the paper, dissented; one of them, M. Le Fort, going so far as to say that “to practise surgical anæsthesia by the injection of chloral into the veins was to show profound contempt for human life.”<sup>3</sup>

On November 2d, M. Oré made a second communication to the Academy,<sup>4</sup> stating that he had then used this method fourteen times, and each

<sup>1</sup> This Report was read before the Journal and Library Association, January, 1875.

<sup>2</sup> *Boston Medical and Surgical Journal*, February, 1874, p. 209.

<sup>3</sup> *American Journal of Medical Sciences*, July, 1874, from the *Gazette Hebdomadaire*, May 22, 1874.

<sup>4</sup> *Archives Générales de Médecine*, January, 1875, p. 113.

time with success. He recommends that the solution be used of the strength of one part of chloral to three of water; that it be injected slowly—fifteen grains per minute; that the vein be punctured through the skin without exposing it by dissection; and that the canula be not left in too long, lest it produce coagulation. From seventy-five to one hundred and twenty grains are generally required, and the injection should occupy from five to eight minutes.

Considering the very uncertain action of the drug when administered by the stomach, and the large number of times that coagulation in the vessels has followed its intra-venous use in cases now on record, there seems little probability that the method can ever become a safe one, despite M. Oré's success.

In a certain number of cases surgeons hesitate to produce anæsthesia by inhalation, on account of the existence of heart-disease. Dr. B. W. Richardson reports two such in the London *Lancet*,<sup>1</sup> both cases of cancer of the breast, in which excision was performed by scissor cutting under ether-spray. In the one case ether-spray was first thrown upon the breast for five minutes to chill the skin, and then the ether was replaced by "anæsthetic ether"—a compound of ether, of the sp. gr. of .720, with hydride of amyle. In a few moments the whole breast was frozen like a hard snow-ball, and the process was continued one minute longer, to equally chill the deeper structures. The incision of the superficial parts was made with small, strong, sharp, slightly-curved scissors, while the deeper parts were cut with similar scissors, tooth-edged. In three minutes the entire breast was removed, of course without any hæmorrhage. During the thawing one vessel bled so freely as to require the application of a ligature, both ends of which were cut off short. Five sutures were applied, and the wound dressed with cotton-wool and styptic colloid. The patient's temperature never rose above 99°, and when the dressings were removed, at the end of five days, the wound had healed without interruption at any point, and without a drop of discharge. The patient stated that she experienced a sensation of numbness, like that felt in the hands in frosty weather, but no pain. The pressure of the scissors could be felt, and an occasional jar; but she was not aware when the incisions were made. One curious result of the operation was, that the irregular action of the heart disappeared, and the patient was restored to perfect health in July, the operation having been performed on the 8th of May.

Soon after the recovery of this patient, a second case, almost entirely similar, presented itself. General anæsthesia was advised against, on account of heart-disease, and the steps of the operation were precisely the same as those already detailed. On the fourth day, union by the first intention was perfect, and on the eighth day the patient was able to go out. "As this second patient began to rally from the operation, the distressing cardiac symptoms entirely passed away, the stroke of the heart improved in tone, the irritability ceased, and the faint murmur became imperceptible." Dr. Richardson remarks upon these cases: 1. That local anæsthesia answered every indication in two patients to whom he could not conscientiously have recommended inhalation, and saved him all anxiety during the operation. 2. The method of cutting with scissors overcomes all the objections urged against the scalpel in frozen tissues. Good scissors are needed, and the tooth-edged instrument in the deeper tissues assists in preventing hæmorrhage. 3. The heart-disease was, of course, purely nervous—either reflex, or the result of mental anxiety; and the early removal of the malignant growth served to cure it.

In another way local anæsthesia has been produced in one case at least. On June 21st, M. Le Fort read before the *Société de Chirurgie* of

<sup>1</sup> August 29, 1874.

Paris<sup>1</sup> a paper, in which he stated that this effect had, in his hands, followed the application of Esmarch's method, and he attributed it to energetic compression of the sensory nerves. MM. Demarquay and Verneuil had experimented in the same direction, but in some cases only dulled the sensibility, and in others had failed in producing even that effect.

The use of carbolic acid as a local anæsthetic has not been forgotten, when the surface to be rendered insensible is very restricted in size; and I have found it especially serviceable as an application preceding nitric acid in the cauterization of chaneroids.

Although the number of fatal cases from the intra-venous injection of chloral has been so great as to deter from the use of that method of producing anæsthesia, it may still be justifiable to resort to it in the management of tetanus, which so rarely yields to any other treatment. At a meeting of the Surgical Society of Paris,<sup>2</sup> M. Verneuil stated that up to 1868 he had never seen a case of tetanus recover. He next reported two cases successfully treated by the chloral method, one being cured in twenty-five days, and the other in a month, the dose being in the first case 90 grains, and in the second 150 grains per day. There is no objection to the drug being administered by the stomach as long as deglutition is possible; after that, the intra-venous method is recommended. This makes a total of five cases that M. Verneuil has thus treated successfully, or a proportion of cures amounting to two-fifths.

M. Bourdy, of Mans, has also reported<sup>3</sup> a case of tetanus successfully treated by chloral and morphine subcutaneously. The daily dose of chloral was 120 grains, and during the treatment the patient took seven ounces of chloral and 27 grains of morphine.

In the *Lancet*, during December last, Dr. J. B. Carruthers reports another case of exceedingly acute character, accompanied by great tenderness over the spine, successfully treated by chloral and bromide of potassium. The patient, a boy, fourteen years old, took in all 1,140 grains of chloral in sixteen days, or over 70 grains per day. The reporter had no doubt of the efficacy of the chloral in saving the boy's life.

On the other hand, in the practice of others, the use of this drug has not been so successful. M. Chauvel has treated two cases by the stomach, both unsuccessfully. M. Tillaux has also reported an unsuccessful case, the chloral being given at first by the stomach, and afterward through the veins. At the *post-mortem* examination, dark clots were found in the cephalic and axillary veins, and firm, white clots in the right auricle and left ventricle.

Dr. E. C. Mann, of this city, has reported<sup>4</sup> a fatal case of idiopathic tetanus, in which chloral, morphine, and Calabar bean, were all tried. It would appear, from the published history of the case, that only fifteen grains of chloral were given at bedtime, a much smaller dose than in the successful cases.

Calabar bean still holds a prominent place in the treatment of this disease, and Dr. Sidney Ringer,<sup>5</sup> and, I believe, one or two others, have reported successes. Many others, however, have not been so fortunate.

During 1874, we have had from Mr. Erichsen, of London, his views on "Hospitalism, and the Causes of Death after Operations." Hospitalism is defined to be "a septic influence capable of infecting a wound, or of affecting the constitution injuriously." Its main cause he believes to be over-

<sup>1</sup> *London Medical Record*, July 29, 1874; in *American Journal of Medical Sciences*, October, 1874, p. 551.

<sup>2</sup> *Union Médicale*, May 23, and *Gazette Hebdomadaire*, May 22, 1874.

<sup>3</sup> *American Journal of Medical Sciences*, October, 1874.

<sup>4</sup> *New York Medical Record*, January, 1875, p. 38.

<sup>5</sup> *London Practitioner*, November, 1874, p. 338.

crowding; not only placing too many patients in a ward of a given cubic space, but also placing too many severe cases, and especially suppurating wounds, in each ward. He regards the whole argument as one not against hospitals in general, but against badly-managed or badly-constructed ones; and suggests, as the remedy, enforcing cleanliness, and avoiding overcrowding.

The usefulness of the aspirator in relieving retention of urine, when, for any reason, the catheter cannot be employed, has been demonstrated by an additional number of published cases, and in many more that have not been deemed worthy of recording, so well established has the operation become. M. Fochier has recently read<sup>1</sup> quite an elaborate paper on the subject, urging its entire freedom from danger, even when, by accident, the peritonæum is punctured. One objection that has been urged against it is that a small amount of urine is liable to remain at the bottom of the bladder, and, there undergoing decomposition, to set up a cystitis. Dr. James A. Hall, of Elmira, N. Y., has pointed out<sup>2</sup> that he has been able to avoid this, by laying the patient on his side, and emptying the bladder completely.

Mr. W. F. Teevan has reported<sup>3</sup> an interesting case of retention, from impassable stricture, in which the urine was induced to flow, *per vias naturales*, by M. Cazenave's plan of plugging the rectum with ice; the stricture was then treated by burning it through with caustic potash, and the results of both plans of treatment were said to be very gratifying.

A rare and interesting case of tumor of the bladder has been put on record. The patient, a boy twelve years of age, began, ten months previous to the date of the operation, to have some pain in passing water. The diagnosis of stone in the bladder was made, and the patient sent to Vienna for operation. He came under the care of Prof. Billroth, who could find no stone, but did find a tumor projecting into the bladder, and preventing a satisfactory exploration with the sound. It was determined to perform the lateral operation, and through the wound make a more satisfactory examination. No stone could be discovered in any diverticulum or elsewhere, but a tumor was found, as large as an apple, attached to the posterior wall. The supra-pubic operation was then at once performed, and the large tumor was, with difficulty, made to pass through the incision. The posterior wall of the bladder was then raised up through the opening in the abdomen, and the pedicle of the tumor carefully dissected out, the proceeding demanding incisions deep into the muscular walls of the bladder. The tumor proved, on examination, to be a pure myoma, and the patient was doing well at last accounts. Dr. Schwaighofer, who reports the case,<sup>4</sup> remarks: "Both on account of its pathological rarity, and of the ingenious boldness of the operator, the case is one which I imagine will be of general interest."

The most thoroughly new and bold operation reported during the past year is to be credited also to the same famous Vienna surgeon. On December 31, 1873, Billroth removed<sup>5</sup> the entire larynx and epiglottis from a man aged forty. The operation was necessitated by carcinomatous growths in the larynx, and Dr. Störek had repeatedly relieved the patient from impending suffocation by removing portions of the growths by aid of the laryngeal mirror and forceps. When this was no longer possible, Billroth made Balassa's operation of laryngo-fissure, cleared out all the growths, and applied some preparation of iron, with the effect of affording

<sup>1</sup> *Lyon Médicale*, December 6, 1874.

<sup>2</sup> *New York Medical Record*, 1874, p. 343.

<sup>3</sup> *London Lancet*, February 7, 1874; in *American Journal of Medical Sciences*, April, 1874, p. 555.

<sup>4</sup> *Irish Hospital Gazette*, July, 15, 1874, p. 224.

<sup>5</sup> *Medical Times and Gazette*, February 14, 1874, p. 192.

the patient relief for about six weeks. At the end of that time the growths returned, and the entire larynx was removed. The patient breathed without difficulty through a canula inserted directly into the trachea, and subsequently a mechanical contrivance was adapted to this, so that the patient could speak intelligibly. Life was prolonged by the operation just about six months.

Since then Billroth has repeated the operation<sup>1</sup> on a man aged fifty, suffering with rapidly-growing epithelial cancer of the larynx, the neighboring glands not being yet involved. The case did not terminate as favorably as the first, the patient dying a few days afterward from hypostatic pneumonia. The fact may be considered as demonstrated, that the operation is a feasible one—that is, not necessarily fatal, *per se*.

The operation of subhyoidean laryngotomy has been performed by Dr. George M. Lefferts<sup>2</sup> for the first time, it is believed, in this country, and for the sixth time in the world. The object was the removal of a ring which had been for four years lodged in the upper part of the larynx of a child six and a half years old, and the result was in every way satisfactory. This is probably the first time that the operation has ever been made for the purpose of removing a foreign body from the larynx.

Mr. John Wood has reported, in the *Lancet*,<sup>3</sup> two more successful operations for complete ectopia vesicæ, by transplanting flaps of skin, turned from adjacent parts of the abdominal wall. The first flap is laid with its epidermic surface toward the bladder, and much annoyance is caused the patient if the hairs are allowed to remain growing on it. He knows of no way to prevent this except to destroy the hair-bulbs *seriatim*, with strong nitric acid, before operating; and nothing will prevent the deposit of phosphates from the urine upon any that may remain, but scrupulous cleanliness. He advises for this a very dilute mixture of nitric acid and water.

The efficacy of skin-grafting, in procuring the healing of indolent ulcers, is gradually becoming more fully recognized, and we have had two good papers on the subject, one by Dr. R. J. Levis,<sup>4</sup> of Philadelphia, and the other by Mr. Benjamin Auger.<sup>5</sup> Both have had large experience with the method, and they arrive at nearly the same conclusions. It is not necessary that the grafts should come from the patient himself, but, when taken from the skin of freshly-amputated limbs, from that covering benign tumors recently removed, and even from the preputial mucous membrane, they have been found to answer equally well. Of course, the skin from the neighborhood of malignant disease, or from an individual with any contagious disease, should be avoided. To insure success, it seems necessary that a portion of the true skin, and not the epidermis alone, should be taken, and the graft should not exceed one-fourth of an inch square in size. This is little more, however, than a confirmation of what was previously known on the subject. It may be worth while to add that it is not considered best to make any incision into the granulations, but simply to lay the graft upon their surface, with its epidermis uppermost, and confine it there.

While speaking of the surgery of the skin, it may be well to note that Dr. Alfred C. Post, of this city, in an operation recently performed at the Presbyterian Hospital, made an application of a plan used long ago by Tagliacozzi, which is believed to be new. That celebrated Italian surgeon, as is well known, was in the habit of preparing the piece of skin out of which

<sup>1</sup> *Wien. Med. Zeitschrift*, November 17, 1874.

<sup>2</sup> *New York Medical Record*, 1874, p. 641.

<sup>3</sup> February 7, 1874.

<sup>4</sup> *Philadelphia Medical Times*.

<sup>5</sup> *Medical Times and Gazette*, December 12, 1874, p. 668.

he intended to build a nose, by separating it from all its connections on two sides and underneath, leaving it to be nourished only from the ends, and so increasing the supply of blood from these directions. Dr. Post's case was one of cicatricial contraction of the neck from a burn, and there was a bridge of skin extending from the lower jaw to the anterior surface of the chest, which it was particularly desirable to use in remedying the deformity, and which was so long and so narrow that it would almost certainly have sloughed if separated on three sides and underneath all at once. The doctor therefore made an incision at each side, raised it from the tissues beneath, dressed it in that position for two weeks with oiled lint, and at the end of that time was able to make good use of it without any loss of substance.

The use of the warm-water bath as a surgical dressing is not by any means new during the past year, but has probably received an impulse in this country from its advocacy by Dr. Frank H. Hamilton.<sup>1</sup>

The same gentleman was probably the first to operate for the radical cure of that very distressing deformity—hallux valgus—by resection of the head of the metatarsal bone, when there was no abscess or caries of the joint. This was year before last; and, during 1874, Dr. Rose, of St. Francis Hospital, has given us a very good paper on the subject,<sup>2</sup> with the histories of five successful cases.

Transfusion has excited much attention, and in the past year many reports have reached us of its extensive trial abroad, with the blood of the lower animals as well as of man, and in cases that threatened to prove fatal, not only directly from excessive hæmorrhage, but also from chronic anæmia and wasting diseases. The operation appears to be a comparatively safe one, the main danger to be avoided being coagulation during its performance. The details of the best mode of operating appear to be still *sub judice*, and as to the benefits to be expected from it, in some classes of cases, reports seem to be very various. It appears to be settled, however, that human blood, not deprived of its fibrine, is to be preferred to any other, while the use of the blood of the lower animals is followed by at least temporary benefit. It was my good fortune, during the war, to see one life saved by the injection of defibrinated blood, with an ordinary syringe, which has never been put on record. The use of milk, instead of blood, has also recently been recommended.<sup>3</sup> In a paper read before the New York Academy of Medicine, in January last,<sup>4</sup> Dr. Fordyce Barker stated that transfusion had been six times resorted to in this city, without ever being followed by recovery. In April, Dr. Joseph W. Howe reported a case<sup>5</sup> in which recovery ensued, and, if not actually dependent upon the operation, was certainly hastened by it.

The elastic ligature of Dittel has still been somewhat used. At a meeting of the Clinical Society of London,<sup>6</sup> on November 27th, Mr. Henry Lee related a case in which it had been employed, and which gave rise to some discussion. The advantages claimed for it seem to be that it acts without loss of blood; that in virtue of its elasticity it remains tight when an inelastic cord would loosen by the shrinking of the inclosed tissues, and that patients will sometimes submit to it willingly who refuse an operation by the knife. For this latter reason we have resorted to it once, with no objectionable result, except the time wasted. The arguments urged against it are that it is not always a bloodless method, one fatal case of hæmorrhage from the carotid artery having been reported after the removal of a cervical ligand, by its use; and that the surgeon cannot control the exact

<sup>1</sup> *New York Medical Record*, 1874, p. 249.

<sup>2</sup> *Ibid.*, 1874, p. 200.

<sup>3</sup> *Obstetrical Journal of Great Britain and Ireland*, December, 1874, p. 549.

<sup>4</sup> *New York Medical Record*, 1874, p. 187.

<sup>5</sup> *Ibid.*, 1874, p. 170.

<sup>6</sup> *Medical Times and Gazette*, December 12, 1874, p. 673.

path the cord shall take, so that in removing a cancerous breast, for example, a portion of the diseased tissue may be left behind. We are inclined to think that, for these reasons, and the length of time involved in its use, the method will never become a popular one.

The kidney has been twice extirpated during the past year,<sup>1</sup> once by Simon, on account of disease, with a fatal result from septicæmia, on the thirty-first day; and once successfully, by Brandt, Professor of Surgery at Klausenburg, on account of injury. These two cases, added to the nine previously on record, make a total of eleven cases in which this formidable operation has been undertaken, with eight deaths and three recoveries.

The success which has of late years attended ovariotomy has shown that the wounding of the peritonæum is not the almost necessarily fatal injury which it was at one time supposed to be. This being ascertained, propositions have arisen to perform various other operations for lesions of the abdominal viscera, which were previously accounted unjustifiable.

Attention has been drawn during the past two or three years, in this country, to the advisability of resorting to abdominal section in cases of intussusception, as well as other forms of intestinal obstruction, by the paper read before the New York State Medical Society, in 1872, by Dr. Stephen Rogers, and the article which appeared in the *NEW YORK MEDICAL JOURNAL*, in August, 1873, by Dr. Samuel Whitall. Mr. Jonathan Hutchinson has more recently read a paper before the Royal Medical and Chirurgical Society,<sup>2</sup> detailing a successful case in which laparotomy was performed on a child two years of age, on account of intussusception, injections, bougies, etc., having previously failed to afford relief. He strongly recommends the operation, when other means have failed, by an incision in the linea alba below the umbilicus, and considers it desirable that all making autopsies in such cases, which have not been operated on, should state whether surgical interference would have been practicable. The difficulty which sometimes attends the diagnosis in such cases is well illustrated by two cases presented to the New York Pathological Society, by Dr. J. Lewis Smith.

Two cases of normal ovariotomy have been reported, the first operated on by Dr. T. G. Thomas;<sup>3</sup> the second by Dr. T. T. Sabine.<sup>4</sup> In both the patients recovered, with very great improvement in the first case, and a cure in the second. In the first case, both ovaries were removed; in the second, only the left.

The credit of the operation of early opening abscesses in the right iliac fossa, the result of perityphlitis, is fairly due to my much-respected preceptor, Dr. Willard Parker,<sup>5</sup> and the success which has followed the operation is really remarkable. In September last, Dr. Gurdon Buck read, before the New York Academy of Medicine, a paper on this subject, in which is included a table of all the cases which had come to his knowledge. They number ten, with ten successes; and it is creditable to our city to be able to add that nine of the operations were by New York surgeons. Additional experience seems to have shown that the incision is best made over that portion of the tumor which appears to be nearest the surface. Dr. Buck recommends that a small trocar, or the needle of an aspirator, be first employed to confirm the diagnosis, and then used as a guide to enable us to reach the cavity of the abscess with ease and certainty. Doubtless the suggestion will prove, in many cases, a valuable one.

Dr. A. Jacobi's paper on gastrotomy<sup>6</sup> for stricture of the œsophagus is an excellent one, collating fifteen examples in all. The arguments in favor

<sup>1</sup> *American Journal of Medical Sciences*, July, 1874, p. 266.

<sup>2</sup> *New York Medical Record*, 1874, p. 36.

<sup>3</sup> *NEW YORK MEDICAL JOURNAL*, August, 1874, p. 181.      <sup>4</sup> *Ibid.*, January, 1875, p. 37.

<sup>5</sup> *New York Medical Record*, vol. i., p. 25.

<sup>6</sup> *NEW YORK MEDICAL JOURNAL*, August and September, 1874.

of the performance of the operation in suitable cases seem good, and it is to be regretted that there is not yet a success to report.

Lumbar colotomy, in cases of obstruction of the rectum, has grown in favor, and reports have been made of successes, both in this country and abroad, in what were otherwise hopeless cases.

In the *NEW YORK MEDICAL JOURNAL* for February last<sup>1</sup> may be found the report of a case in which Dr. Charles A. Leale was able to introduce his hand into the rectum of a woman profoundly narcotized by chloroform, after the manner proposed by Simon. No difficulty was experienced in touching a point on the abdominal wall four inches above the umbilicus; in feeling the edge of the liver; in grasping the fundus of the uterus in the palm of the hand, and feeling a tumor growing from it of the size of a walnut, and in examining both ovaries. When the hand was withdrawn it was not even tinged with blood, and there were no unpleasant consequences. The value of this means of diagnosis in cases of pelvic and abdominal tumors, if as easily practised in all cases as in this, can scarcely be over-estimated.

Another instance of sudden death quickly following the injection of perchloride of iron into a nævus situated on the frontal bone reminds us that this mode of treatment is not free from danger.<sup>2</sup>

M. Bourguet (d'Aix)<sup>3</sup> has succeeded in procuring union in pseudarthrosis of the femur after the methods commonly in use had failed. He employed the injection of stimulating solutions between the fragments, and near the broken ends of the bones, the substances used being ammonia (of one-third, and afterward one-half the usual strength) and iodine. Subsequently the leg, thigh, and pelvis, were kept perfectly quiet by the silicated apparatus.

Several histories of cases published during the past year have forcibly illustrated the necessity of adhering, whenever possible, to the good old rule laid down by Guthrie, in case of dangerous hæmorrhage from wound of an artery, "to tie the wounded vessel at the point of injury, and tie both ends of it." Of course the rule cannot always be adhered to, but Prof. H. B. Sands has recorded<sup>4</sup> one instance, in which following the rule was attended with very great difficulty, and in which the result amply repaid the effort. It is probable that many a surgeon, who was a less accomplished anatomist, might have shrunk from undertaking it. The history of the case is full of interest and instruction. The patient had been relieved of a scirrhus tumor of the lower jaw, the operation necessitating division of the external carotid artery, which was ligated. On the tenth day secondary hæmorrhage came on, the source of which was unknown, so serious in amount as to demand radical measures for its arrest. Pressure in the wound controlled it temporarily. A ligature was first passed under the common carotid; but compressing that vessel between the ligature and the finger failed to stop the bleeding when the pressure was taken off. The pressure being renewed, the internal carotid was next tied above the bleeding point, and the ligature, already placed around the common carotid below, was tightened. The pressure was again removed, and "no gush followed, but a bleeding continuous in character and small in amount." Careful inspection now showed the source of the hæmorrhage to be "a small, circular, clean-cut ulceration in the side of the internal carotid artery, situated an inch below the upper ligature, and the same distance above the upper border of the thyroid cartilage." A third ligature, placed around the internal carotid, two or three lines below the opening, entirely con-

<sup>1</sup> Page 169.

<sup>2</sup> *American Journal of Medical Sciences*, April, 1874; from *Lancet*, February 7, 1874.

<sup>3</sup> *Amer. Jour. Med. Sci.*, April, 1874, from *L'Union Médicale*, Feb. 10, 1874.

<sup>4</sup> *NEW YORK MEDICAL JOURNAL*, January, 1874, pp. 34, 41.

trolled the slight bleeding which still persisted, and which must have come through branches springing from the stump of the external carotid. Dr. Sands was of the opinion, at the time that he reported the case, that it was the only one on record "in which a lesion of the internal carotid had been treated by the application of a double ligature to the injured vessel, one on the proximal and the other on the distal side of the bleeding point." In a subsequent note, however, Dr. Sands states that his attention has since been called to a case published by Prof. W. T. Briggs, of Nashville, in 1871, in which that gentleman opened the sac of an aneurism of the internal carotid artery, and applied ligatures to the wounded vessel above and below the bleeding point. It is interesting also to notice in Dr. Sands's case that a small opening having been accidentally made in the internal jugular vein, a ligature was thrown around the wound, and the calibre of the vessel not occluded. No further bleeding occurred from that source, and there is no reason to suppose that circulation through the vessel was interrupted.

On the other hand, the history of a case of pistol-wound of the neck, treated at Bellevue Hospital, is reported,<sup>1</sup> in which secondary hæmorrhage occurred from a spot which could not be exposed; and, because it was well known that ligature of the common carotid might fail entirely to restrain the hæmorrhage, its branches—the external and internal carotids—were tied with the happiest result. Since the result was the salvation of the patient's life, it may be hypercritical to find fault with the operation; but it certainly seems difficult to conceive of any wound, or combination of wounds, of one or both of these vessels, for which ligation of both, near their origin, is the simplest and best treatment, on anatomical grounds alone. It is also difficult to see why this operation would be less likely to be followed by brain-symptoms than ligation of the common trunk. But if circumstances compelled the ligation of one of the branches so close to the bifurcation as to render it probable that the current of blood, through the common trunk and the other branch, would wash away the plug on the proximal side of the ligature, then undoubtedly stopping the current through the other branch is advisable. It has been shown by Dr. Longworth<sup>2</sup> that ligation of the external carotid, especially when performed above the digastric muscle, is a very safe operation, and should control bleeding from that vessel and its branches beyond the point of occlusion. When that vessel is wounded too close to its origin to permit of the formation of a clot, the internal carotid, and either the external or common, must be tied. In wounds of the internal carotid no plan can be a safe one except that adopted by Dr. Sands, of ligating the vessel on both sides of the wound. Some of these points are brought out in Dr. Stephen Smith's recent paper on this subject.<sup>3</sup>

The best method of treating aneurisms is just now exciting much thought and discussion among operating surgeons. The splendid lectures of Mr. Timothy Holmes<sup>4</sup> are probably familiar to you all. The method of controlling the circulation through the aneurismal sac, either by flexing the limb at one of the articulations, or by pressure on the main trunk above by some kind of mechanical contrivance, is growing in favor. Cases published by Mr. Bryant, of Guy's Hospital,<sup>5</sup> and Dr. Sands, of Roosevelt,<sup>6</sup> illustrate its usefulness in suitable cases. But it does not always succeed; and the claim has been made that, when it has failed, the artery is left in a bad condition for subsequent ligation. Mr. Holmes does not think that this necessarily follows.

<sup>1</sup> *New York Medical Record*, 1874, p. 88.

<sup>2</sup> *Archives for Scientific and Practical Medicine*, No. 5.

<sup>3</sup> *NEW YORK MEDICAL JOURNAL*, January, 1874, p. 40.

<sup>4</sup> *London Medical Times and Gazette*, summer of 1874.

<sup>5</sup> *London Lancet*, December, 1874.

<sup>6</sup> *New York Medical Record*, November, 1874, p. 561.

Dr. Plagge, of Darmstadt,<sup>1</sup> has succeeded in curing a traumatic aneurism of the femoral artery by subcutaneous injection of ergotin, in a patient in whom it was feared that ligation of the external iliac would prove fatal.

In another case in which ligature was contraindicated by the existence of heart-disease, and the bad condition of the arterial coats, Mr. Bryant<sup>2</sup> treated a popliteal aneurism by introducing horse-hair into the sac, after pressure had failed. This was the second operation of the kind on record, the first having been performed by Dr. Levis, of the Pennsylvania Hospital. Both patients died.

During the past year a very important case has been operated on by Dr. Daniel M. Stimson, of this city. The patient, a young man of eighteen, bore on the right side of his neck a tumor, which constituted so great a deformity as to attract the attention of every one who passed him in the street. There was nothing noticeable at birth, except a discoloration of the skin over the lower jaw, but the growth began in early life. It consisted, for the most part, of a double fold of much-thickened and hypertrophied skin; sprang from a line running from a point near the occipital protuberance behind, downward, and forward, to a point on the lower jaw, nearly below the angle of the mouth, and hung down so far as to cover the lapel of his coat. The ear had grown to double its natural size, was very much thickened, and the top of it turned over on itself. The meatus auditorius externus was drawn down by the weight of the ear, very nearly, if not quite, an inch. The growth contained evidently many large blood-vessels, and firm nodules, pressure on which caused unconscious spasmodic contractions of the muscles raising the shoulder, and which were therefore supposed to be nerves hypertrophied, and curled up on themselves. The growth had apparently appropriated to itself more than its fair share of the nutrition supplied to the region where it was situated, and, as a consequence, the lower jaw and clavicle on that side had never been developed to correspond with the other side of the body, and there was marked drooping of the shoulder. The case acquired additional interest from the fact that, a few years ago, nearly all the celebrated surgeons on the other side of the Atlantic had been consulted, and had advised against operation, only one of them, Billroth, thinking that it might be done, but refusing himself to undertake it. Dr. Willard Parker was of the opinion, last spring, that the growth could be removed with safety, and the result, at the hands of his partner, proved the correctness of the decision. The tumor was removed at two sittings, the first on May 28th, and the second on October 1st. The first operation lasted two hours and a half, and consisted of the removal of the anterior portion of the tumor, by a long and tedious dissection, which exposed the pes anserinus, and also the sheath of the carotid artery for the space of an inch and a half, and involved the removal of a part of the parotid gland. A considerable amount of blood was lost, but the patient rallied well from the operation, and the wound healed kindly.

The second operation lasted about as long as the first, consisted of the removal of the remainder of the tumor, and was not attended by any special difficulty. The hæmorrhage was severe, but the means ordinarily in use sufficed to control it.

Microscopical examination proved the growth to be a molluscum simplex, and it is to be hoped that the operator will soon publish the history of the case in full. This sketch of it is derived in part from his case-book, and in part from his kindness in allowing me to see the patient and the second operation. The improvement in the patient's appearance was most marked.

<sup>1</sup> *London Medical Record*, February 11, 1874.

<sup>2</sup> *American Journal of Medical Sciences*, April, 1874, p. 550; from *Guy's Hospital Gazette*, December 6, 1873.

Dr. Byrne, of Brooklyn, by the introduction of his galvano-cautery battery, and his book on its use in uterine surgery, has done much to popularize the method of removing tumors by the wire heated by electricity, where this can be substituted for the knife, when hæmorrhage is to be feared during an operation. Objections have been urged against Dr. Byrne's form of instrument, but its portability and efficacy, when properly handled, will probably render it more generally serviceable than any other battery which has yet been introduced for the purpose.

It was only during 1874 that Esmarch's method of rendering operations upon the extremities bloodless came into common use among New York surgeons, though Dr. Krackowizer was the first to employ it in this city, in October, 1873. The necessity, in certain cases, of saving every possible drop of the vital fluid for a patient who had recently suffered a profuse hæmorrhage, or was the subject of chronic anæmia, had long been recognized. Comparatively rude attempts to accomplish this by raising the limb, stroking it toward the trunk, so as to favor the return of venous blood, and then quickly applying Petit's tourniquet, were frequently made. This, however, does not in the least detract from the credit due to Esmarch for having perfected and introduced all the details of a method by which the object could be perfectly accomplished. Suggested simply by a desire to save blood, it has been found to facilitate many operations, such as those for necrosis, and the removal of tumors, in which the main difficulty of the operation lay in the parts being obscured by constant slight hæmorrhage. The only serious objection urged against it is that paralysis has occasionally followed its use. This appears, however, to be due to the injudicious use of a hard, small cord, for the tourniquet, instead of a softer one of larger diameter, or a flat band. I am sure, also, that I have often seen the cord applied much more tightly than was at all necessary, and that many do not appreciate how slight an amount of pressure is needed to control even large arteries. This method was the subject of Dr. Sands's inaugural address as President of the County Medical Society, a few weeks ago. His able paper,<sup>1</sup> and the discussion which followed, brought out all the main points on both sides, and are so fresh in the minds of all that repetition would but prove tedious. On that occasion, Dr. Parker expressed the opinion, in which all will agree, that the introduction of this method is probably the most important contribution to surgery since the discovery of anæsthetics.

<sup>1</sup> NEW YORK MEDICAL JOURNAL, January, 1875, p. 1.



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