

Murphy (Ed. A.)

NOTES

ON

ELECTRO-SURGERY

WITH

CASES AND OPERATIONS.

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CHICAGO:

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SURGICAL NOTES.— We desire to call the especial attention of our readers to the article on another page under the modest title of "Surgical Notes," They merit a most careful perusal, and if this is an earnest of what we may expect from this scientific author, we most heartily welcome Dr. E. A. Murphy, of New Orleans, to the surgical ranks. Our friend, Dr. W. H. Holcombe, thus speaks of him: "I inclose you some most interesting "Surgical Notes," by my talented and esteemed friend, Dr. Edward A. Murphy, of this city, who is destined, with proper encouragement, to be the Helmuth, Franklin or Beebe of the South. * * * * Our great need here has been for years a Homœopathic surgeon. I think we have found one who will do us credit. He has been practicing almost exclusively among the old Creole population, and his worth has but recently been made apparent to the American element, He is also a most excellent Homœopathic physician."— EDITORIAL, p. 68.



ELECTRO-SURGERY,

WITH CASES AND OPERATIONS.

MR. EDITOR: I have taken the liberty to offer a few surgical notes, extracted from my diary. I shall merely report the cases, without going into any unnecessary details, further than a statement of facts. Should you consider these articles worthy of your valuable journal, I shall be happy; as, through your columns, I may be able to impress upon the minds of the surgeons of our school the necessity of the study of galvanism.

Already has the Homœopathic surgeon shown to our opposers the advantage of our treatment in assisting the curative powers of nature, thereby lessening the dangers of the knife. With our *Aconite*, *Arnica*, *Calendula*, etc., conservative surgery has had a better opportunity of developing its benefits; and now, to those advantages, may I not claim to have been the first in the South to introduce another benefactor — galvanism.

GALVANIC SURGERY.

Mr. Gazzam, of Mobile, aged 75, had been submitted several times and by the best surgeons — among them the late Dr. J. C. Nott — to the operations for hydrocele, but invariably the tumor returned. My talented friend and colleague, Dr. Wm. Murrill, of Mobile, advised Mr. G. to give me a trial, which he did, and the result was a complete cure, without pain, without losing a drop of blood, and without emptying the contents of the cyst. In twenty minutes he was cured.

Although I do not intend to write an essay on electro-surgery, yet I shall call the attention of the profession to a few important

points on this new adjutor. In former years it was well known that electricity gave two currents, but their effects were unknown, consequently they were indiscriminately employed and, as a consequence, the results were not encouraging. Study has thrown light enough on the subject to show the different electro-chemical decomposition which takes place at the poles; decomposition giving different products, which difference depends on the substances upon which they act. The negative current dilates and decomposes, while the positive contracts, irritates and inflames. The negative never causes inflammation; the positive, as a general thing, does. The different actions of the two poles are to be borne in mind. Quantity and intensity are also to be well understood. In a thunderstorm there is great intensity and very little quantity; while the electricity from a battery has a great deal of quantity and very little intensity. Beard and Rockwell, two of our best authors on this subject, give the following example: "A gallon of water heated to 100° has a greater quantity of heat than a pint heated to 500° ; but the heat of the latter is much more intense." If we use too much of one or the other, we do not decompose, we cauterize; if too little, we cause a momentary irritation, which offers no favorable result. Therefore, before resorting to this agent, I should advise a thorough knowledge of electricity. Many have failed to obtain even an encouragement from electricity,—but was it not due to a want of study; to ignorance as to the different actions of the two poles and to the difference between quantity and intensity?

The hydrocele of Mr. G. was of many years' standing, and was on the right side. It contained fully half a gallon of liquid; its size, as may be judged, was enormous. I plunged into the tumor three gold needles, of about three inches in length and as large as a hair pin. They were then connected with the negative pole and the current was closed by placing the positive electrode upon the thigh. No pain, at first, was felt, but soon it became unbearable, for I had given the full power of 32 cells of a zinc and carbon battery, thinking that the voluminous size of the tumor would require it; but I soon discovered my error—I was cauterizing instead of decomposing. I then reduced to 20 cells, and immediately the scrotum began to move with a vermicular movement, and soon after a swelling appeared, as if a few ants had paid it a visit. This was caused by the escape of hydrogen through the tissues. A clear

and distinct hissing was heard, so much so that one would have thought that a frying-pan was near by at work. The needles came easily out, showing that the tissues surrounding them had been decomposed and dilated.

In this case, the tumor did not offer that doughy consistency which it generally does. I could not feel the coagulum which extreme polarization generally produces. The resorption, nevertheless, was rapid. The only after treatment required was a suspensory bandage.

Reader, think of the suffering of humanity when submitted to injections of port wine, iodine, and to the insertion of the seton! Compare it to a galvanic cure! Just imagine, that in twenty minutes, watch in hand, and while conversing agreeably with your patient, that he leaves your office cured, having experienced no pain, not even the loss of a drop of blood. I am proud to say that I am the first in the South who introduced this blessing to suffering humanity.

STRICTURE OF THE URETHRA. — CURED BY GALVANISM.

Mr. B., aged 24, has been suffering for years with stricture — had been submitted to the old treatment, dilatation by Holts' dilator, etc. After a protracted treatment, which caused a great deal of pain and loss of time, the operation of urethrotomy was whispered. Hearing of my galvanic cures (I am not a specialist) he called upon me.

I passed up the urethra an insulated bougie, *i. e.*, a bougie surrounded, with the exception of the tip end, by gum elastic. This protects the healthy portion while the current acts upon the stricture. The bougie was connected with the negative, and the positive applied to the thigh.— Remember the negative dilates.— He felt no pain, and in three or four minutes this stricture was *non est*. The small particles of hydrogen which were liberated by the decomposition, penetrated the minutest parts of the tissues, and thereby separated their fibres. No pain was felt. I used twelve cells. It is in those cases where it is absolutely necessary to fully comprehend the action of electricity, for if we were to use the wrong pole we would irritate and contract instead of dilating and decomposing; if we used intensity or too much quantity we would injure our patient by cauterizing.

VARICOSE VEINS. — GALVANIC CURE.

Baumgarten and Wertheimer advised the use of the positive pole to obtain a rapid coagulation of the blood, while the more recent investigations of Althaus are opposed to it. A case having offered itself, I made the following experiment: A steel gilded needle was plunged into one portion of the vein, and another needle was introduced into another varix. The leg was bandaged to prevent further supply of blood, and one needle was connected with the negative, the other with the positive current. In a few minutes the portion acted upon by the positive pole was a resistant cord, while the negative portion was soft, and after the withdrawal of the needle there was oozing of serum. The blood was decomposed, but no coagulum. The case was not seen after this. Steinlin says that if a platina needle is used coagulation is slow; if it has an iron point it is more rapid, and it is still more so if a zinc needle is used. This is due to the influence of the metal, as some favor more than others, the decomposition of acids, the precipitation of albumen, etc., when certain salts are separated from the serum of the blood, by the electric current, the albumen and fibrin are no more held in solution, hence the immediate coagulation.

REFLEX PARALYSIS.

In adopting the name of reflex paralysis, I am aware of the injustice that I am doing to morbid anatomy while I am giving importance to a symptom, a prominent one it is true. I do so to be better understood. A lady, aged 40, mother of three children, had a miscarriage, from which she bled profusely, so much so, that her life was despaired of. She became so feeble that she was unable to raise her head from the pillow. Her physician had the boldness and courage to bleed her to arrest the flow. After a few days she felt a pricking sensation in the lower limbs, and could not retain fæces. She complained of not urinating. It was said that she had not passed her urine for forty-eight hours(?) (undoubtedly the urine was dribbling out with the flow). To arrest this flow *Ergot* was administered, and that freely; other drugs were given, but what they were I do not know.

When I saw the lady she could not walk alone. A stick or

pieces of furniture were required to prevent her from falling. Her legs were atrophied; her sight was failing her (this was due to the action of the sympathetic); bowels very irregular, and every now and then there was a dribbling of urine. She could not walk in the dark, and she noticed that if she closed her eyes while standing, although supported by a piece of furniture, she would waver and had to open them or fall.

The question arises: What was the disease? I am told that it was called myelitis by one physician. This gentleman, certainly, was laboring under a great mistake. We have three organic affections of the cord: Myelitis — which is an inflammation of the cord; spinal meningitis — this is an inflammation of the membranes of the cord; the third is, congestion — either of the vessels of the cord or its membranes. Which of those three had I to deal with? Evidently none of them.

To prove that I am correct, by giving the differences of the three diseases would occupy too much time and space, therefore I shall simply say that the case was one of "Anæmia of the cord," causing reflex paralysis. Putting aside my Homœopathic ideas, let me view the treatment to which the case was submitted. In the first place, to arrest hæmorrhage by blood-letting is entirely made away with, and no physician of standing will hesitate to condemn such a nonsensical method.

The administration of *Ergot* showed that the M.D. did really believe that he was dealing with a case of myelitis, for it is a remedy very much used in inflammatory affections of the cord, and I must say with very encouraging results. But how could any thoughtful man, pretending to be a physician, think of congestion when the poor patient was nearly bloodless. Unfortunately, too numerous are the practitioners who look upon every case of paralysis as being the result of an organic affection of the cord. It is the same thing as those who are always ready to pronounce a case "apoplexy," let it be cerebral hæmorrhage, or cerebral embolism, or cerebral thrombosis. In those cases apoplexy is a very prominent symptom, but this does not justify us in adhering to past ideas, such as existed before morbid anatomy was understood as fully as it is now a days.

In the case of this lady *Ergot* was not indicated, as there was no need to lessen the amount of blood, neither was there any irritability to be diminished. On the contrary, a desired increase of

blood and excitability were the two great desiderata. How irreparable damage was not done is incomprehensible.

We are more or less subject to errors, especially in diagnosis. As yet the mind of man is too limited to encompass and fully comprehend the organization of the human frame, but when the life of a fellow being is at stake, we should be certain that we are not adding injury to the disease. Why did the gentleman not make use of a simple means of diagnosis? — a hypodermic injection of *Strychnia*. This would have settled the question. This case does not belong to surgery, and, therefore, is not under the proper heading, but I thought that I would be allowed to transgress, while I was on the subject of electricity, as the lady was submitted by me to the beneficial influence of this agent.

As a matter of experiment I applied the Faradaic current to the lower limbs, and found that it required a powerful current to affect them. As a rule, the action of the currents on the muscles is a sure aid to diagnosis. When the diseased muscles respond to Faradaization, you may be certain of success, but there are cases, and they are numerous, where this current remains powerless; it is then we have to call upon the more powerful galvanic current before we can get the Faradaic to act, and seldom later than sixty or sixty-five days after the action of this last named will be required to complete the cure. Many a practitioner has failed to derive any benefit from electricity by neglecting this difference. When the Faradaic current does not cause even a very feeble contraction it is perfectly useless to lose time by insisting on its application; the galvanic must now be brought into action to start a cure; the Faradaic treatment begins where the galvanic stops.

The disease being located in the spine, it would have been folly to have resorted to local application as a means of cure, consequently general galvanization of the spine and sympathetic was first resorted to, and the patient kept, for a few days, under the influence of *China*.

The cord needing irritation, its circulation increased and its nutrition cared for, I administered, daily, a hypodermic injection of the one-sixtieth of a grain of *Strychnia*. Under this treatment, assisted by a generous diet, my patient improved with wonderful rapidity. One month after the first application of the galvanism, I resorted to the Faradaic current, and two months afterwards I left the case cured.

FIBROUS TUMOR.

Mrs. Emilie Laurent, aged 21, married, no children; had a small tumor over the angle of the shoulder. It was of the size of a hen's egg, when a doctor was called in. *Iodine* was injected into the tumor, after which it grew with wonderful rapidity. Finally, it grew to be as large as the head of a fœtus. Her physician insisted that it could not be removed without exposing the articulation, thereby endangering the limb and life itself. I was called in, and advised extraction, which was agreed to. She was brought under the influence of chloroform, and an elliptic incision was made. Upon carefully dissecting away the piece of skin, the deltoid muscle came into view; it was parted by carefully separating the fibres, when the whole tumour was removed. There was considerable bleeding, as the tumor was fed by numerous small arteries. Torsion was resorted to. A very curious freak of nature was this tumor. It was, in shape and appearance, a perfect penis with its testicles, having the raphæ, etc., and a line of demarcation for the glans. The wound healed nicely, and on the third day the patient was attending to her household duties, with her arm in a sling.

LEAD PARALYSIS.

Mr. H., aged 37 years, married; a painter by occupation; habits good. Has suffered from several attacks of colic; vomiting was a frequent thing with him; very costive; urine scanty; both wrists offered the characteristic dropping. The right side was more affected than the left; he was losing control over his lower extremities; the gums of the lower and upper jaws have the usual blue line. This dropping of the wrists, especially the right, was, and is yet, by some considered as being the result of the constant contact with the paint, and that other cases of poisoning, *i. e.*, those not occurring among painters, have not the wrists affected. This is a grave error. In the first place, if the immediate contact of the lead with the hands was the cause, would it not be more reasonable to find the flexor muscles paralyzed, rather than the extensors? The flexors do the most work. But we invariably find the extensors victims. This single fact, according to my judgment, is enough to settle the question. Cases of lead paralysis, whether caused or not by certain washes, hair restorers,

drinking water containing lead, etc., all have their extensors paralyzed, and the right hand is the most affected. All have those characteristic symptoms, besides others which belong to the individuality of the patient.

In regard to the treatment, I do not think it boldness to say that it is impossible to complete a cure without the aid of electricity.

First of all. How can you prognosticate a case unless you obtain an idea of the muscular contractability? Even with the Faradaic current as an aid you cannot, in advanced cases, form a diagnosis. You may say: the only trouble is the lead which is in the system; remove this and nothing more will be required. You may make use of *Strychnia*, you may eliminate the lead from the system by the *Iodide of Potassium*, which will combine with the lead, to form a soluble salt, leaving the kidneys to carry it off. You may soothe his intestinal spasm, etc., by our heroic Homœopathic remedies, yet the muscles will not come under control of the will, unless you call to your assistance electricity.

This patient was ordered the following:

Kali Hydriodatum ʒ iii.

Aq: Dist: ʒ vj.

A table-spoonful every four hours: the doses to be decreased in proportion as the blue lines disappear from the margin of the gums.

Having no dynamometer I could not test the muscular power of the hands.

In this case the Faradaic current had no effect. The irritability of the extensors was so nearly destroyed that the primary current from a 32 cell battery acted but feebly. Nevertheless this was enough to satisfy me that success would be obtained. Under this simple treatment, in six weeks, my patient was discharged. I must confess that I did not anticipate so speedy a cure.

DISLOCATION OF THE MAXILLARY.

At midnight, while all the world was asleep, and Nature herself appeared to be slumbering, I was roused, and called from the sweet arms of Morpheus, by the ringing of the door bell. It was an old colored woman, who "waked up with a pain in her ears." Finding it impossible to close her mouth, she called upon one of my

neighbors, an M.D., who tried to reduce the dislocation, but succeeded only in mutilating her mouth by rough and ill-directed manipulations. Her gums and the angles of the mouth were bruised and torn. I found it a difficult task to reduce this dislocation. The poor woman's mouth and face were so horribly bruised that I could not touch her without causing severe pain. I reduced it by using, *on the dislocated side only*, the thumb as a fulcrum and the chin as a lever. I shall not detail the indications to be fulfilled; they are too simple and well known; but I call particular attention to the diagnosis of these cases. Had my neighbor examined the case carefully, he would not have thought of using a thumb on each side. The usual four-tailed bandage was applied.

LIGATION OF THE EXTERNAL ILIAC — RECOVERY.

The abdominal aorta bifurcates at the fourth lumbar vertebra, and gives off the two primitive iliacs that run downwards and outwards; then again they bifurcate into the external and internal iliacs; between the two, but in close connection with the external iliac, is the external iliac vein, while to the inside of the internal iliac artery is the vein of the same name. The external iliacs extend from the upper margin of the sacro-iliac symphysis to seven millim., to the lower half of Poupart's ligament, whence they take the name of femoral. The external iliac courses along the inner margin of the psoas muscle, having only the iliac fascia to separate them. Although Morton says that the artery is covered by the peritoneum, yet a careful dissection will show that a loose cellular tissue, which may be considered as a sheath to the artery, is between it and the peritoneum. Without going into further anatomical description, I will describe the operation. A negro boy, aged 16, had a tumor immediately under Poupart's ligament, which proved to be an aneurism. Origin unknown. Some physician had painted this swelling with iodine, and wanted to open the *abscess* (!). He maintained that the beating was due to the impulses which it received from the femoral artery, over which it was situated. The case came under my care, and the following operation was performed. He was placed under the influence of chloroform by placing an opened handkerchief over the mouth and nose, and allowing the chloroform to fall drop by drop from a

pipette. I find this the most prudent manner of administering the anæsthetic, for equal parts of air and chloroform are inhaled. In fact, the patients themselves appreciate the difference, and they get as quickly under the influence.

An incision was made just above and parallel to Poupart's ligament, extending from the external abdominal ring to about three inches upwards, making a semilunar wound with the convexity downwards. The cellular tissue, the oblique and transverse muscles, were divided, when the fascia transversalis came to view. This fascia is a fibrous membrane, *sub-peritoneal aponeurosis*. In some places it is indistinct, and the thickened portion which is between the peritoneum and the transversalis takes the name of fascia transversalis. The cutting of this requires care, not to injure the peritoneum. This fascia was carefully taken up with forceps, and a small opening was made, then a grooved probe was introduced and the fascia opened the whole extent of the wound. The peritoneum was then carefully pushed aside, and "*les parties sous jacentes*" were separated with the fingers, when the artery presented itself. With one of Cooper's needles a ligature was passed from inside under the artery and the vessel ligated. I was on one occasion present when a French surgeon performed this operation, and in passing the ligature he passed it from outside inwards. This is wrong, for in doing so he took up the vein. There have been instances where the intestines were wounded by this improper introduction of the needle. Always carry the needle from inside outwards. The wound was closed with twisted sutures, and *Aconitum* and *Arnica* were given internally. The latter was applied locally.

After a few moments the temperature of the limb began to fall, when warm bran was applied; this application was kept up during the whole day. He was fed on a good nourishing diet, and stimulants were strictly forbidden. In all abdominal wounds, the probe, stimulants and narcotics are to be "done away with," while in other wounds they are of importance. The wound healed nicely and the recovery was prompt.

STRABISMUS.

The operation for strabismus was at a time in great disrepute. This was due to the numberless failures of the old operation, when

the conjunctiva and subconjunctival tissues were widely incised. No care was given to the capsule of tenon, which was freely lacerated, and the "climax was capped" by cutting the muscle, which would retract to its separate attachments and the portion belonging to the globe would serve as a prop and prevent the globe from occupying its relative position in its orbit. Frequently to cure a converging squint a diverging one was produced.

As a general thing, I prefer Von Graefe's subconjunctival operation, to which I submitted the following lady:

Mrs. C., aged 49, Myopic — had a cataract "left eye," also a double converging strabismus.

Before operating for cataract, I performed strabotomy. When under the influence of chloroform the lids were kept apart by the spring speculum with a finely-pointed forceps. I seized a small fold of the conjunctiva close to the edge of the cornea, just above the insertion of the internal rectus, and with a blunt-pointed scissors, bent on its flat, I snipped the uplifted fold. Then a careful burrowing beneath the subconjunctival and in a backward direction. The squint-hook was then introduced, with its point in an opposite direction from the tendon. The rounded part of the hook was then pressed upon the globe, and a sweep, in the direction of the tendon, was made, passing the hook below the tendon, when the hook was drawn up pulling the tendon to the opening made in the conjunctiva. In this movement care should be taken to press downwards, otherwise the point of the hook may separate the fibres of the tendon, causing a re-introduction of the hook and useless manipulations. The tendon was then snipped with the scissors as near its insertion as possible. The hook was again introduced to find any fan-like expansion that might be there, for if a single fibre is left uncut the result of the operation may be compromised. The other eye was operated on in the same way. In this division of the tendon it is necessary to divide it close to its insertion, otherwise it may retract within its sheath, which would prevent it from adhering to the sclerotic. I take this opportunity to call the attention of young surgeons to the imperative necessity of a thorough knowledge of the anatomy of the eye and its appendages, also a complete understanding of the actions of the muscles, before undertaking an operation, which, in itself, is not very difficult, yet this operation, when requisite, in other cases besides squint — when diplopia exists for instance —

requires the greatest exactitude. Neither do I approve the bandage and confinement in a dark room. As a general rule, I send, if a school-boy, to school. I advise my patients to go to their usual occupation. Among twenty-two cases operated during one month, seventeen were sent from the operating-table to the school-room.

CATARACT — CURE.

Von Graefe's modified linear extraction. In the operation for cataract, four things are to be taken into consideration, if we wish to have an idea of what the result will be.

The action of atropia; perception of light; the field of vision; the size of the cornea. It is useless to go into any further details on these four conditions, as every oculist is familiar with them.

Five periods are necessary in the operation for cataract: Incision; iridectomy; laceration of the capsule; removal of the lens; and bandaging.

The patient (the strabie case) having taken chloroform, the lids were separated by the spring speculum, then, with Graefe's knife, its edge turned upwards, I entered the corneo-scleral upper portion of the cornea, one-third of a line from its edge. The knife entered at the point A, "©" and taking a downward direction to C until it could be seen in the anterior chamber, when the handle was depressed and the knife-point took a horizontal position to make a counter-puncture at B. The edge of the knife was now turned towards the cornea, and pushed as far as the blade would allow, and by a careful drawing back of the knife the section was finished, giving a conjunctival flap, which was thrown back upon the cornea. The iris hook was introduced and a portion of the iris drawn out and snipped. The size of the iridectomy must vary according to the size of the hardened lens. Scientifically, this may be of great value, but practically of very little importance, except in exceptional cases; for, as a general rule, the upper lid hangs so as to cover the upper third of the cornea. Of course, if the patient is possessor of a cornea unprotected by the lids, then we must make as small an iridectomy as possible, for besides the unsightliness there would be a diminished acuity of vision produced by the glare, which would cause irregular refraction. It is preferable to make a large section, as no bad result can come from it, while a too small opening will certainly compromise the operation. Always

remove the iris very close to its insertion, otherwise the portion left may remain between the sections of the wound, and prevent or retard re-union.

The cystitome was next introduced and the capsule lacerated. As I am not writing to give practical points, but simply to report cases, I shall not describe the *modus operandi* of the laceration of the capsule, although I consider it one of the most important moments of the operation.

By a gentle pressive movement of the spoon on the lower portion of the cornea the cataract was removed. The wound was carefully closed and the conjunctival flap was made to resume its place and the eye closed. Then a small piece of linen was dipped into cold water and placed over the lids, and over this lint was put to fill up the cavity, so that the bandage would press evenly upon the eye when the flannel bandage was applied. Recovery was prompt.

NEW ORLEANS,
194 Canal Street.

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New Orleans,
1st March 1846