gent evidence. That chemical changes of all kinds occur in tissues and glands, is not to be doubted; but we must not confound together a change effected *in* a tissue, and one effected *through* it. Urine is readily separated from arterial blood *in* the kidney; yet would any one expect, on placing blood *upon* a kidney, that urine would drop through it? A candid examination of many of the fashionable applications of endosmosis to physiological functions, will discover no wide difference between them and this hypothetical case.

47. It is well known that those who first cultivated this department of science, viewed it as a case of electrical action. In this they did not go far astray; the machinery being erroneous though the principle was true. Capillarity is unquestionably an electro-statical phenomenon, and hence will hereafter come to be intimately allied with chemistry. An important and extensive series of effects, which now pass as instances of electrical attraction, will be assigned to it; such the adhesion of colouring matter and dyes to cloth, the silvering to a looking-glass, the solution of salts, and generally all cases of union where the uniting bodies lose none of their prominent characteristics.

March 24th, 1838.

ART. III. *Cases of Surgery.* By M. MORRISON, M. D., Member of the Medical Chirurgical Society of Maryland, and Licentiate of Medicine and Surgery of the Medical Tribunal of Buenos Ayres.

CASE I. *Stricture of the Urethra; partial destruction of this canal; urinary fistulæ.*—Dr. Angel Gonsales, ætat 46, a native of Buenos Ayres, had suffered since 1827 with strictures in the urethra. In 1831, an abscess formed *in perineo,* which opened of itself, leaving a urinary fistula; since that period two fistulæ have likewise formed *in ano.* In the month of December, 1835, he took a severe cold, which affected the bladder, and produced a retention of urine; another abscess now formed *in perineo,* which was opened with a lancet, and from some attempts which were made by the physician then in attendance, to pass an instrument into the bladder, there unfortunately resulted a false passage which communicated with the rectum. From this time forward, when the patient was about to make water, he had to incline the body forwards, the stream of water flowing from the fistula in perineo backwards, and but a very few drops escaping through

its natural passage. This state of things produced a high degree of constitutional irritation and fever.

I saw the patient for the first time, in consultation with the attendant physician, on the 2nd of March; he was then very much emaciated; suffered from night sweats; pulse 120, and had been confined to bed for the last two months. Upon examination I found the skin of the perineum detached, the subcutaneous tissues having been destroyed by ulceration. The smallest sized gum elastic bougie could not be introduced into the bladder. The urine cannot be retained longer than an hour; deposits, when passed, a large quantity of mucous. Notwithstanding the patient's low and distressing state, I thought that if an instrument were introduced by which the urine might pass off, the parts would heal. At a consultation of surgeons held on the 4th of March, my views were explained, and being adopted, I proceeded to operate in presence of Drs. Portela, Almayra, and Fontana.

The patient being arranged as if about to undergo the lateral operation for the stone, an incision was made parallel with the urethra, which exposed the *musculi acceleratores urinæ;* these being divided, the urethra was laid bare; a silver probe introduced per urethram came out at the false passage on the right side of the bulb; the original fistula was far back in the membranous portion of the canal; a probe introduced in the fistula readily passed into the bladder. The prostate gland was found very much enlarged. The callous edges of the fistula being pared away, I then divided the bulb and membranous portion as far back as the fistula. A No. 10 bougie was passed into the bladder, and retained in its place by tapes carried round the scrotum, and the patient put to bed.

5th. Had a chill last night; urine escapes by the wound; suffers no inconvenience from the presence of the instrument; pulse 116; ordered to lie only on one side without changing his position.

6th. Doing very well, passes all his water through the instrument; pulse 112.

My patient went on improving until the 15th of this month, when the instrument was stopped up by mucus, and the urine began to escape again by the wound. Another bougie was introduced, and things again went on well until the 30th, when it was necessary to open an abscess, which formed in the *corpora cavernosa penis.* It was now also necessary to discontinue the use of the instrument. My patient's health had considerably improved since the operation, his night sweats had disappeared, and his appetite was good. The wound healed up very slowly, and notwithstanding all my efforts there remains a small fistula in perineo, from which a little water oozes occa-

sionally. Gonzales, however, is now possessed of a good share of *embonpoint*, and is able to attend to his business. He can retain his water three hours, which continues to deposit a mucous sediment. This patient was seen, whilst under my treatment, by Drs. Chase and Pickney, of the U. S. Navy.

Case II. *Imperforate Vagina.*—Towards the latter part of February, 1836, I was requested to visit Doña Gregoria Llanos, ætat 19, a native of Buenos Ayres, and at that time residing in the Calle de la Reconguista. This young woman had been suffering since her fourteenth year with a retention of the menses, in consequence of a congenital imperforation of the vagina. At each menstrual period she suffered very much, particularly at night; the bearing down pains were sometimes so excruciating that she frequently wrapt a blanket around her body and rolled herself on the floor; her screams have been heard at the distance of half a square. She says that at the period of menstruation her genital parts become very tender, and that a tumour presents itself *in perineo*; the pains seldom continue longer than two days. Upon examination I found the vagina completely closed; by pushing the finger, however, in the direction of that canal, some traces of it could be distinguished, and by pressing on the hypogastric region at the same time, an obscure fluctuation was perceived. This proceeding gave the patient great pain. The *meatus urinarius* was very low, and appeared to be drawn downwards; the clitoris was of its natural size; the hypogastric region very prominent; in fact, any one unacquainted with the nature of her case would suppose her to be pregnant. A large and circumscribed tumour occupied the right iliac region, which I concluded to be the right ovarium. I now told her it would be necessary to undergo an operation, to which, by giving her hopes of success, she readily consented. The operation was deferred for the present, and I did not see her again until the latter end of the following April.

April 29th, M. After having been examined by Drs. Portela and Carter, the patient was placed on a table as for the operation of lithotomy. A transverse incision, of little more than half an inch in length, was made a few lines below the *meatus urinarius*, by which the hymen, (if such it may be termed,) which consisted of a dense ligamentous substance, was divided. This incision, however, only revealed new obstacles to be overcome. About an inch and a half within the cavity of the vagina another dense membrane was discovered, which prevented the egress of the contents of the womb. Fluctuation was now very evident. I introduced the forefinger of my

left hand, along which I carried a small scalpel, and with this instrument I divided the septum. On withdrawing the instrument a grumous substance of a chocolate colour began to flow out, and the discharge continued until four pounds were evacuated. The prominence of the hypogastrium, together with the tumour of the right iliac region, then entirely disappeared, and a large gum elastic catheter having been introduced to prevent the closing of the parts the patient was put to bed.

30*th.* At 10, A. M., I had the pleasure to find my patient with her *catamenia;* she passed a very good night; no pain in the region of the womb; no inconvenience in making water; pulse 70.

May 1*st.* Had a severe chill in the night; has vomited several times; menstruation suspended; very restless; skin hot; tenderness of the hypogastrium; pulse 130, and hard. I bled her twenty ounces, when she fainted. At 8 o'clock, P. M., extreme tenderness in the hypogastric region; twenty leeches were applied, the bleeding from which was kept up by warm fomentations.

2*nd.* Was delirious through the night, no discharge from the vagina; a small tumour has made its appearance in the right iliac region; abdomen to be fomented with a decoction of poppy heads; pulse 130.

3*d.* Abdomen tympanitic, extremely tender to the touch; has had no discharge from the bowels since the day of the operation; pulse 130. Ten cups with scarifications to be applied; and an *enema* of tepid water, to which was added an ounce of almond oil, to be administered.

4*th.* Bowels moved three times in the course of yesterday afternoon; passed a very bad night; much thirst; skin very hot and dry; tenderness of the abdomen less; pulse 130. To take a tepid bath at 8, P. M.

5*th.* I found my patient sitting up in bed with a very wild expression of countenance; says that there is nothing the matter with her; has been delirious through the night; pulse 130. Ordered 20 grs. ipecacuanha.

6*th.* Four bilious vomitings were produced by the emetic of yesterday, after which patient slept three hours; no pain in the region of the womb; swelling of the abdomen has subsided; tumour in the right iliac region as large as before the operation; pulse 130. Fomentations to the tumour.

7*th.* Passed a tolerably good night; tumour continues increasing, but is not so tender as it was; pulse 120. Fomentations to be continued.

8*th.* As yesterday pulse 120. An enema.

9*th.* The tumour has enlarged; has had two chills during the night; spirits much depressed, feels very weak; pulse 120. Chicken broth.

10*th.* Bowels moved twice since my visit of yesterday; has had several chills of short duration; the tumour to day extends as high up as the twelfth rib, and inwards to within an inch of the *linea alba;* it increases in volume from below upwards, and resembles an ostrich egg in shape, and is as large; fluctuation in it very distinct; patient very much emaciated; pulse 120.

11*th.* Five alvine discharges during the night, the three latter of which consisted of a sanguineo-purulent matter; the tumour has disappeared; patient's spirits much better; pulse 112; a discharge of a *muco*-purulent fluid from the vagina. A blister to be applied to the right iliac region.

The blister was kept open for fifteen days with the savine ointment. From this period my patient convalesced rapidly, and on the 20th of August following she menstruated. There can be no doubt but that the ovarium had suppurated in this case, which, fortunately for the patient, had formed adhesions with the ascending colon, into which organ the matter contained in the tumour was conducted by the process of progressive ulceration. It will be remembered that this tumour likewise disappeared on the day of the operation, which shows that there was a communication established between the tumour and the womb. I have some doubts whether the grumous matter which I have mentioned before, might not have been contained in the fallopian tube distending it so as to form the tumour which existed previous to the operation.

It gives me pleasure to add that this young woman has enjoyed very good health up to the present date, January, 1838.

Case III. *Pendulous Aneurismal Tumour on the Thigh.*—Don Bartolo Xerez, a native of the province of Santiago del Estero, ætat 35, presented himself in my office on the 1st of November, 1836, for advice respecting a pulsating tumour which hung pendulously from his left thigh, and was situated between the origin of the *arteria profunda femoris* and Poupart's ligament.

This tumour resulted from a wound with a knife, which transfixed the artery and vein. The patient told me that in riding at full gallop in the month of August, 1825, the belt in which he carried his knife shifted its position, and in the act of bringing his horse suddenly to a stand, the knife piercing its scabbard, passed through his clothing and wounded his thigh. The hemorrhage was trifling, and was checked by tying a handkerchief around the limb. He suffered no incon-

venience from the wound, which healed of itself without any further attention. About a month after, however, he noticed an elevation, which pulsated, in the site of the cicatrix; it gave him no pain, but went on increasing, and at the expiration of four months acquired the size of a small fig, to the form of which he said it bore a very great resemblance. At that time he resided in his native province, and there being no physicians nearer to him than those who practised in the cities of Mendosa or Cordavo, he obtained no medical advice. The tumour ceased to increase in size, and did not incommode him in any manner until the month of May, 1836, when, being engaged in branding cattle on an estancia about sixty leagues to the south of Buenos Ayres, the tumour suddenly became very painful, and began to enlarge. From this period it incommoded him in riding, and became so painful in the month of October that he had to keep his bed. He now resolved to visit Buenos Ayres for medical aid. When I first saw him the tumour was as large as the human uterus in the third month of gestation, and I can think of no object which it resembled more than that organ. It hung pendulously from the thigh by a thick neck or pedicle, and its movements were isochronous with those of the heart; sibilation was very distinct in it, and its parietes were so thinned by distension that at the site of the cicatrix the skin was not thicker than a bladder. When pressure was made on the crural artery at the brim of the pelvis, the tumour became flaccid, and the sibilation ceased; pressure being made on the tumour and crural artery at the same time, the former was entirely emptied of its contents, the blood flowing downwards; when pressure was removed the tumour became distended by the ingress of venous blood, and the moment the pressure was removed from the crural artery, the tumour was immediately distended to its full extent, and the sibilation returned. When emptied of its contents spiculæ of ossific matter could be felt in various parts of its walls, but more numerous in its pedicle, communicating to the latter a peculiar hardness, and destroying its elasticity. The leg had never swelled. The crural artery above the tumour was considerably larger than its fellow on the opposite side, a circumstance, to which, I regret to say, I gave too much importance. I proposed to Xerez to operate, and as he was incapacitated from labour he readily acceded to my proposition.

On the 5th of November, in a consultation of surgeons, it was agreed that an operation was imperiously called for by reason of the extreme tenuity of the walls of the tumour, particularly in the site of the cicatrix. As the patient had been confined to bed some few days previous, we proceeded to operate in presence of Drs. Portela and

Bombilleier, according to the method of Abernethy, applying but one ligature on the artery. The wound was dressed with adhesive straps, over which pledgets of lint were placed, and the extremity being bandaged with flannel rollers, the patient was put to bed. His body was placed in an easy position, with the leg partially flexed on the thigh, and the thigh on the pelvis, and bottles of hot water put to the leg and foot.

8, P. M. Excruciating pain in the leg of the operated side; coldness of the toes, which, together with the foot, was sensible to the touch. The patient compares the pain in the tibia to be such as if boiling lead had been poured into it; pulse 120; heart labours very much; slight difficulty of breathing. I took twenty ounces of blood from his arm, and remained with my patient until 10 o'clock. To relieve the pain of the leg an *enema* of two ounces of mucilage, in which were dissolved two grains of opium, was administered.

6*th*. The pain of the leg continues, but is not so intense as it was last night; the patient has vomited twice this morning; the foot is very much swollen and insensible to the touch; meteorism of the abdomen; tenderness of the epigastrium; respiration hurried; pulse 130, and intermittent. An emollient enema was administered, which produced an evacuation, and the discharge of a large quantity of gas, to the very great relief of the patient.

10*th*, P. M. Has vomited several times in the course of the day; thirst very great; no pain in the leg, which, together with the foot, is very much swelled; pulse 120, with intermissions. I now suggested to the patient the urgent necessity of amputating the leg in order to save his life. He would not listen to the proposal. Through the efforts in vomiting, the dressings had been removed from the wound, which was very painful, and looked bad; it discharged a thin and darkish sanies. Fresh dressings were applied. Previous to my leaving the patient for the night, I ventured once more to speak of amputation, at which Xerez showed evident signs of mental distress, and weeping, assured me that he was resigned to his fate.

7*th*. Slept none last night; constant eructations, accompanied with a discharge of a dark greenish very bitter matter; body covered with a clammy sweat; abdomen very much distended; pulse 120, and very irregular. At 1 P. M. nature now gave signs that all was lost; frequent singultus; hands and wrists cold; tongue black and parched; lips and nose below the natural temperature; the wound black and filled with an offensive sanies. It was truly distressing to witness the agonies of this poor fellow, which continued until 4 P. M., when he

lost his speech and mental faculties. He died at 5 o'clock; fifty-three hours from the operation.

The friends of the deceased could not be prevailed on to allow me to examine the body, but I was fortunate enough to receive permission to remove the tumour, which is now in my possession. To dissect it out, I extended the wound freely upwards, and detaching the peritoneum from the posterior wall of the abdomen, and pushing it upwards, divided the iliac artery and vein as high up as the bifurcation of the aorta; and the dissection being continued downwards as far as the profunda femoris, the entire piece was removed. At the site of the ligature, the artery was divided by the efforts in vomiting, the ligature remaining attached to the upper extremity of the artery. There was a coagulum in the artery of an inch and better in length—a circumstance which throws new light on the theory of Mr. Jones. There was likewise a coagulum formed in the inguinal extremity of the artery. Quills introduced into the artery and vein passed readily into the aneurismal sack.

We believe that this is the second case of varix for the cure of which the external iliac was tied. The other is recorded in Hennen's Military Surgery.

Case IV. *Popliteal Aneurism.*—Don Manuel Carrasco, ætat 42, a native of this province, consulted me in the beginning of January, 1837. His right leg was œdematous, and a large pulsating tumour occupied the popliteal cavity of the same side. While taking a warm bath about twelve months ago, he was suddenly seized with a very acute pain in the right ham; in putting down his hand to ascertain its cause, he discovered a small pulsating tumour in the popliteal cavity. When I saw him, the neighbouring tissues and the knee itself were much inflamed and swollen. I explained to the patient the nature of this affection, and the operation necessary for its cure. In a consultation of surgeons it was agreed to operate. At noon on the 15th January, in presence of Drs. Portela and Revera, I laid bare and tied the artery with a flat silk ligature, two inches and a half below the origin of the *arteria profunda femoris*. The patient suffered a great deal during the remainder of the day with pains in the foot; and at 8 p. m. there was a coldness of the toes; pulse 80.

16*th*. Patient passed a bad night, more in consequence of a rheumatic affection of the walls of the chest than from any inconvenience resulting from the operation; he complains of a pain in the tendo achillis; pulse 90; foot of its natural temperature.

17th. Passed a good night; leg and foot of its natural temperature; pulse 86; ordered a purgative enema.

18th. The adhesive plaster with which the wound was dressed, produced an erysipelatous eruption, with phlyctænæ of the thigh; this eruption extended itself above Poupart's ligament. I removed the dressings from the wound, in which union had taken place. The eruption was dressed with simple ointment; pulse 100.

19th. The local irritation produced by the adhesive plaster has diminished; pulse 90. From this period the patient progressively improved; the tumour grew daily less, and the rheumatic pains of his chest subsided altogether. On the 4th February, the celebrated traveller and profound naturalist, M. Bompland, visited my patient with me.

13th February. This day the ligature came away, and in a few days afterwards el Senor Carrasco sat up on a sofa. The leg continued very weak, a circumstance which obliged the patient to make use of crutches until the latter end of March, when he left this city to go to his estancia at the other side of the river Sallado. This gentleman's health had been very indifferent for some time previous to the operation: it improved considerably during the period he was under my treatment, which I attribute to the very strict diet to which he was subjected. He continues well up to the present date, January, 1838; the use of his leg is completely restored.

Case V. *Inguinal Aneurism, attended with consecutive Hemorrhage*.—Don Pedro Suares, ætat 25, a watchman, came to my office in the beginning of February, 1837, to consult me respecting a pulsating tumour in the left groin. He told me he had recently left the hospital, where he had been judiciously subjected to a course of treatment calculated to retard the increase of the tumour. On this his first visit to me, his leg was œdematous; the tumour in the groin pulsated strongly; the soft parts in the vicinity were swollen and tender to the touch. I explained to him the nature of this tumour, and the operation necessary for its cure, and the probability of death occurring as a consequence of it. I now read to him an account of a similar operation* which I performed on the 3d December, 1835. This poor fellow told me that he was resolved to undergo any operation by which his life might be saved. I advised him to go home, to remain quiet, to keep cooling and sedative applications to the tumour, and to send me the number of his house, that I might visit him. From

* Vide American Journal of Medical Sciences, Vol. XIX. page 333.

this period I lost sight of Suares for three weeks, when, in place of sending for me, he had the imprudence to come to my house on foot. The size and aspect of the tumour on this day were truly alarming, and by reason of its inflamed state, the patient had to bend forward and make use of a stick in walking, and drag the leg of the affected side after him. The following day I called a consultation of surgeons, and we resolved to operate immediately: nevertheless, delay occurred, in consequence of this poor fellow having to seek a place through charity where he might remain during his confinement to bed. On the 11th of March, in walking a distance of a few squares, the tumour suddenly increased to an enormous size. I have considered it necessary to be thus particular, to show why I did not operate earlier.

On the 12th of March, my patient having received the consolations of religion, the following operation was performed in presence of Dr. Portela, Lecturer on Anatomy and Physiology in the Medical School of Buenos Ayres, and of Dr. Alexander Dick, Member of the College of Surgeons of London. I made an incision in the lower and lateral part of the abdomen on the left side, about half an inch on the outside of the crural artery, commencing a little above Poupart's ligament, and extending three inches directly upwards. By this incision the tendon of the external oblique muscle was laid bare, which was divided to the extent of the wound in the integuments; the internal oblique and transversalis muscles, were now detached from Poupart's ligament, and divided directly upwards with the probe-pointed bistoury to the extent of two inches; the peritoneum was then detached from its surrounding connections, (the relation of the parts were so altered from the size of the tumour that the spermatic cord was not seen in this step of the operation) and pushes upwards towards the sacro-iliac junction. The external iliac artery was now sought for and raised from its bed to a sufficient extent to admit the introduction of an aneurismal needle under it, and immediately secured with a flat silk ligature. The tumour was but slightly diminished by the application of the ligature. It extended from the symphysis of the pubis to the anterior inferior spinous process of the ileum downwards to the extent of two inches below Poupart's ligament. During the course of the operation the patient suffered from excruciating shooting pains through the abdomen, and downwards into the anus; a spasmodic retraction (I had almost said an obliteration) of the testicles took place, which caused him to scream out from the intensity of his sufferings. I attributed these phenomena to the inflamed state of the parts implicated in the operation. When the patient was made to put his hand upon the tumour, and felt that all

pulsation had ceased, he appeared to forget all his sufferings. His leg was flexed upon the thigh and the thigh on the pelvis, the limb wrapped in a flannel roller, and bottles of hot water put to the leg and foot. The operation occupied ten minutes. At 8 o'clock, P. M., his pulse was at 60, the extremity free of pain.

13th. Passed a good night; on the afternoon of this day his pulse rose to 82, and was characterized by a peculiar hardness; the great vessels in the neck and the temporal arteries were throbbing violently, and although he had no pain in the breast he was breathing with difficulty. I opened a vein in his arm and bled him to twenty ounces, which afforded signal relief; his pulse rose to 100, and became soft. Complains of heat in the tumour; cloths wetted in cold water were applied to it.

14th. Pulse 90; a saline purgative draught was administered, which operated through the course of the day.

15th. Pulse 84. Dr. Cortines, of Salta, visited my patient with me to-day.

16th. Tumour does not diminish; the dressings were removed from the wound, in which no union had taken place by reason of the tension of the integuments from the size of the tumour. I now dressed the wound by filling it with lint, as advised by Scarpa.* From this date nothing of consequence occurred until the 23d, when, notwithstanding the cold applications, fluctuation was distinct in the tumour. Dr. Lamb, of H. B. M. packet, visited my patient to-day; we now entertained some fears for our patient's safety, in consequence of the degeneration of the contents of the tumour. I resolved, however, not to touch it until the separation of the ligature.

On the 25th, being fourteen days from the operation, the ligature came away with the dressings, and from the advanced stage of the suppurative process in the tumour, and the inflamed state of the integuments which covered it, no alternative was left but to open it. I accordingly made a small puncture with a very fine lancet, in the outer and inferior portion of it; a sanguineo-purulent matter flowed out; the tumour soon disappeared, and continued suppurating until the 31st, when, at 6, P. M., hemorrhage took place within the sac, the blood flowed out in a stream, but the pationt, with great presence of mind, made pressure over the site of the puncture with lint; the blood continued to flow until the sac filled, and when I arrived, the groin, now distended with the coagulated blood, presented the same appearance as before the operation.

* Vide Reflexiones et Observationes Anatomico-Chirurgicales sur L'Aneurisme; par A. Scarpa, p. 297. Paris, 1809.

April 1st. In presence of Drs. Dick and Portela, I laid open the tumour in its entire extent, and, to our astonishment, no hemorrhage occurred. The femoral artery, in the bottom of the sac, lay denuded of its superior connections and its upper extremity forming a cul-de-sac, which was an inch distant from Poupart's ligament. We had a fine demonstration of the manner in which the circulation is carried on in the thigh after the external iliac is tied, as the main trunk of the artery was obliterated, or rather destroyed, from the site of the ligature to an inch below Poupart's ligament. We were satisfied that the blood was flowing into the femoral from the circumflex arteries, or rather from them into the profunda, and from the profunda into the femoral artery. We likewise satisfied ourselves, by touching the denuded extremity of the femoral artery, that no coagulum was formed within. We could not decide whence the hemorrhage proceeded the night before, but concluded that it might have taken place from some of the branches about the groin. The diseased and isolated state of the femoral artery deterred us from disturbing it to lay a ligature on it above the profunda; and the fear of gangrene of the extremity through want of blood, deterred us from tying it below the origin of the *arteria profunda femoris*; under these circumstances we resolved to fill the sac, and leave the case to nature.

2nd. At my visit I found my patient in good spirits, his pulse at 84, and soft; every thing was going on well, but at 9, P. M., a frightful hemorrhage took place, which was stopped after a serious loss of blood, by making pressure with lint as I had directed in case such an accident should occur. Upon my arrival my patient's pulse was almost imperceptible, he was pale as death, but his moral courage remained unshaken. I now hastened to ascertain whence the hemorrhage proceeded, and, to my sorrow, discovered it to be from the main trunk of the femoral artery, which I grasped with the thumb and forefinger of my right hand, but the artery was so altered by disease that a piece of it an inch in length came away between my fingers; the blood rushed from the dilated artery in frightful quantity. To stop the hemorrhage I thrust my forefinger into the gaping mouth of the artery, a circumstance which conveys an idea of its dilated state better than any description I could give. Despairing now of being able to save the life of my patient, I made my opinion of his case known to him, and told him that even to stop the hemorrhage it was necessary to perform a painful operation; his answer was that he resigned himself entirely into my hands.

With the view of detaching the profunda from the main trunk of the femoral artery, (after showing one of the bystanders how to plug

the artery with his finger,) I made an incision in the course of the last mentioned artery down the thigh, and laid it bare; next detached the femoral from the profunda, and fruitlessly endeavoured to secure the latter artery with a ligature, the hemorrhage, however, submitted to a compress of lint, upon which I dressed the wound, binding down the dressings firmly with a bandage. The lateral circulation which conveyed blood into the femoral being now cut off, I lost all hopes of the case, and told the patient to take of any nourishment which he desired; he requested some sweetmeats, which were immediately procured. The leg being placed in an easy position, bottles of hot water were applied to the extremity.

3d. Passed a restless night; pulse 110 and feeble; the toes of the operated limb were cold, no feeling in the great toe, and the foot itself was enormously swelled; in fact, life was almost extinct in it; my dread of gangrene was now extreme, but to excite the venous circulation, I made a high degree of pressure to the foot by means of a bandage.

4th. Swelling of the foot less, heat more developed in it; sensation returned to the great toe; pulse 100. From this date my patient began to improve again. On the 6th of April suppuration was freely established in the wound, and on the following day (notwithstanding the dressings were constantly moistened with a strong solution of the chloride of lime) the fœtor was so great that I was compelled to remove the dressings; the wound looked well, and granulations began to shoot up. Every thing went on well until the 12th, when a hemorrhage occurred at midnight from the internal circumflex artery. When I arrived the bleeding had stopped, the patient was pulseless; there was no sensation in the limb of the operated side; I did not hesitate in applying the actual cautery to the mouth of the bleeding vessel: a death-like coldness spread itself over the body of the patient, and his stomach rejected every thing he swallowed; he was also tormented with a burning thirst. Having bandaged his thigh, bottles of hot water were applied to his extremities, and his body rubbed with warm flannels.

13th. Pulse 120, and feeble; sensation returned to the limb.

14th. Being apprehensive of another hemorrhage, I called a consultation, and we resolved to tie the internal circumflex artery on the pudic side of the femoral vein, and the operation was attempted, but without success, in the presence of the two medical gentlemen already mentioned, and Dr. Francisco Almeria, Professor of Medicine. The cautery was then again applied to the mouth of the vessel which was situated immediately beneath the femoral vein; the sides of the

wound were brought together, and compresses laid over it and retained with a bandage. From this date every thing went on well, the wound in the thigh healed rapidly, and the patient's strength was soon restored. A fistulous sinus, which had formed in the walls of the abdomen, was healed by dilating it with tents moistened in the tincture of myrrh. Three large ulcers in the vicinity of the external malleolus required attention; they were dressed with applications of a mildly stimulating character. My patient began to sit up to his meals. On the 12th of May, Dr. Mentufer, who had seen the patient previous to the operation, did me the favour to visit Suares with me.

After the last attack of hemorrhage, a phenomenon occurred worthy of recording; the patient lost sensibility to the touch all over the body, and did not recover it for twenty-five days. A coldness of the knee of the operated side began to disappear about this period, and a genial heat developed itself in the whole extremity; the skin, which was shrivelled and pale over the whole body from loss of blood, likewise began to assume its natural smoothness and colour.

From the history of this case, which I believe to be without a parallel in the annals of surgery, (as the hemorrhage in Dupuytren's celebrated case came from the smaller arteries, vide *Leçons Orales Faites á l'hotel Dieu*, par M. le Baron Dupuytren, tome quatrième,) it will be seen how capable nature is to carry on the circulation in an extremity, when not only the principal arterial trunk is obliterated, but likewise when all its branches are separated from it, a circumstance which will not fail to give an impulse to the already advanced state of our surgical knowledge of the arteries.

Suares made use of crutches until the month of December. The use of the extremity at this date, February, 1838, is perfectly restored, and he goes about both on foot and on horseback with as much facility as if the operation had not been performed. As the aneurism made its appearance when Suares was in the employ of the Superior Government, General Rosas, Captain General of this province, has conferred a pension on him.

Case VI. *Spasmodic Constriction, with Fissures of the Anus.*—Don Manuel Rubio, ætat 34, began to suffer in July, 1836, with severe pains in the anus when in the act of relieving his bowels; his alvine dejections were frequently tinged with blood. At the expiration of two months, intolerable itching in the fundament came on, which continued an hour, and sometimes two, after stool. At this time he lived at an estancia very far distant from Buenos Ayres, and consequently remote from medical advice; he therefore applied to quacks, and in

the course of a short time made use of a number of barbarous remedies, but finding no relief, as a last resource he began to take Le Roy's purgative medicine, of which, in the course of four months, he took eighty-seven doses. Such impropriety greatly aggravated his disease, he was no longer able to ride on horseback. His sufferings were now so great that he diminished the quantity of his aliment in order to lessen the necessity of evacuating his bowels. He at length resolved to come to Buenos Ayres, and I saw him for the first time in the latter part of October, 1837. Upon examination I discovered some fissures at the verge of the anus, one of which was very deep, and extended inwards to the extent of half an inch; it was situated on the left side, and occupied the middle of the sphincter; its edges were elevated; the sphincter itself was callous and considerably swelled. The patient assured me that he had never had the venereal disease in any form; nevertheless, I put him on diet, and prescribed small doses of blue pill to be taken at bed time. I likewise ordered him to drink the compound decoction of sarsaparilla. I made an attempt to relieve this man by the introduction of M'Kenzie's patent metallic bougie, (having received a few of them together with his Book from London,) besmeared with Dupuytren's ointment, but without any appreciable effect. He became impatient, and he himself urged me to use more energetic means.

On the 24th November, 1837, I performed Boyer's operation of dividing the sphincter ani. (Vide *Traité des Maladies Chirurgicales*, par Boyer, Paris, 1834, tome x.) The incision was made in the site of the large fissure mentioned above, and extended directly inwards to the margin of the bowel; the fibres of the sphincter muscles were completely divided. The hemorrhage was very slight, but the patient suffered considerably from the inflamed state of the parts. I now applied the speculum, and was enabled to see far into the bowel, which was red and excoriated. The wound was dressed by introducing a small portion of dry lint, to prevent union taking place; a compress with the T bandage being applied, the patient was put to bed. From this period his sufferings ceased, and on the third day from the operation his bowels were moved, and, for the first time since the commencement of his disease, without pain in *the anus.* From this date I dressed the wound daily, and sponged the parts freely at every dressing with cold water. The other fissures healed up rapidly; and the wound itself was perfectly cicatrized at the end of six weeks, during which period the patient kept his bed.

Case VII. *Urinary Calculus.*—On the 4th of December, 1837, I was called to see Mr. James Campbell, ætat 40, a native of Bengal. I found him suffering with a retention of urine, caused by the presence of a calculus in the membranous portion of the urethra, which had passed from his bladder into the urinary canal the night before, and after remaining for some hours in the prostatic portion of the urethra, had gained the position already mentioned. His sufferings were extreme, from the efforts of the bladder to expel its contents. I endeavoured to grasp the calculus with the urethral forceps of Weiss, but its size rendered the attempt fruitless. The patient was immediately put into a warm bath; when he had been there half an hour, I introduced a No. 12 metallic bougie down to the stone, and having retained it there ten minutes, suddenly withdrew it a few inches, the patient making efforts at the same time to expel his urine. The stone by this manœuvre suddenly gained the bulb. The patient was now enabled to pass his water, the calculus giving no pain. I ordered him to drink freely of flaxseed tea; and returned again to see him three hours afterwards. He was suffering again with spasmodic contractions of the bladder, not a drop of urine passing. With the bougie I succeeded in getting the calculus to pass onwards in front of the scrotum, from which position, in part with my own efforts, and partly by the efforts of the patient to expel his urine, the foreign body was urged forwards into the corpus spongiosum urethræ. The patient was again enabled to empty his bladder. From its present position, the calculus passed readily on to the fossa navicularis. From this portion of the urethra it was dislodged with difficulty, by reason of the existence of a cicatrix in this spot; the patient being cut three years before to extract a calculus. I determined, if possible, to avoid that proceeding. The patient now suffered considerably from the compression which I made on the urethra behind the stone; but I had the satisfaction in a few minutes of seeing the stone at the meatus, from which place I dislodged it by grasping firmly with my forefinger and thumb the glands penis behind the calculus. The calculus is half an inch in length, and semilunar in form, and its surface is studded with irregular elevations; it weighs 26 grains. A calculus of this size being removed from the urethra without the loss of a single drop of blood, argues strongly against the propriety of cutting the urethra in similar cases; and, as it regards the dilatability of the urethra, may be regarded as a new argument in favour of lithotripsy.