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THE
UPPER CANADA JOURNAL

OR

Medical, Surgical, and Physical Science.

FEBRUARY, 1852.

ORIGINAL COMMUNICATIONS.

ART. XLVI.—*Case of Aneurism of the Arteria Innominata.* By
VESEY A. BROWN, M. R. C. S., Assistant-Surgeon Royal
Welsh Fusileers.

THE subject of the following case first came under my observation in the beginning of last September. He was a bricklayer by trade, aged thirty-three, a married man and father of several children, of habitual good health. He stated that his habits were generally temperate, and that he did not overwork himself. Four or five years ago he accidentally fell from a height on a rafter, on his right axilla. Ever since he had been in indifferent health. The first ailment he had to complain of was pain in the right shoulder, shooting up the same side of neck. This was followed by derangement of the digestive organs. For both of these symptoms he was subjected to a variety of treatment, but without any permanent benefit. About a year ago, his attention was drawn by a sensation of tightness and weight which he experienced in the upper portion of the chest, under the right clavicle, accompanied by slight palpitation of the heart, to the real seat of his disease. What he most complained of was excessive pain in the shoulder-joint, shooting up the right side and back of neck into the occipital region, and down along the arm into the fingers. He also complained of pain, dyspepsia, restlessness, want of appetite, constipation of the bowels, and other symptoms of derangement of the stomach.

He came up to the hospital in order to ask advice as to the propriety of putting himself under the care of Mr. Mott, of New

York, for the purpose of undergoing the operation of the ligature of the arteria innominata, which was deemed feasible by some of his medical attendants. He seemed to be perfectly aware of the nature of his disease, and its several modes of cure, and expressed himself as willing to undergo any operation for its removal.

On a physical examination of the chest, a very apparent fullness, with corresponding dullness, was perceptible, extending from beneath the right sterno-clavicular articulation to below the second rib and towards the mesial line. The superficial veins in this region, and on the corresponding side of neck and arm, were tortuous, enlarged, and congested. The face, especially on the right side, was puffed out. The action of the heart was natural, its impulse below the præcordial region was feeble, but a strong jarring impulse was communicated to the ear when the stethoscope was applied to the upper part of sternum, where a distinct *bruit de soufflet* was audible, extending from the arch of the aorta to both carotids. This was synchronous with both sounds of the heart; it could also be heard in the portion of chest between the post. supr. angle of scapula and the spinal column. There was a marked difference between the pulses in both wrists,—that in the left it could scarcely be felt. The respiratory murmur in both lungs,—both anteriorly and posteriorly, was natural. The peculiar purring thrill of aneurism was very plain, on placing the hand over the right sterno-clavicular articulation. Carefully considering the signs and symptoms of the case, the diagnosis lay between an aneurismal swelling of the arch of aorta or arteria innominata,—the preference was given to the latter; consequently I strongly endeavoured to dissuade him from his purpose, and recommended him occasional small bleedings, absolute rest, low diet, and small doses of hydrocyanic acid, and digitalis in camphor mixture, with acetate of morphine at night. I lost sight of him until the middle of November, when he sent for me. A considerable change had in the mean time taken place in the features of the case. The previous symptoms all existed; but in an aggravated form; and in addition there was evident fulness perceptible in the *antr. infr.* triangle of the right side of the neck, immediately above the sterno-clavicular articulation, which was bulging forward. On pressing downwards and backwards with the points of two fingers, the apex of a round solid tumour was distinctly felt, being still more apparent when compared with the corresponding situation on the opposite side; it also gave him great pain. The varicose condition of the cervical vein was also much increased; the tracheal respiration and deglutition were daily becoming more distressing; he was unable to lie down at night; and could not obtain any rest without the aid of the strongest opiates. He informed me that he had gone to New York, but that Mr. Mott had given him but little encouragement. When returning he had been very sick on board one of the steamers on Lake Erie,

which made him much worse. He continued in this state until the middle of December, when the tumour began visibly to increase,—apparently upwards, backwards, and inwards,—pressing on the œsophagus and trachea; the impulse in it was very strong, but, curious to say, the bruit had totally disappeared from its former situation. The symptom chiefly complained of was the most excruciating pain, shooting from the shoulder up the neck to the back of the head, and down the arm into the hand and fingers, which were numb, and required constant rubbing. He continued much in this state for three weeks, when all his sufferings became more distressing; the trachea was pushed at least an inch from the mesial line to the left side; the tumour also was daily increasing,—its shape was quite defined, and could be seen extending along the clavicle into the post. infr. triangle of the neck; the parietes of the sac appeared to be very thin; his face was of a yellowish pale colour, and haggard looking; the right hand was numb and powerless, wrist swollen, and pulse scarcely perceptible at the left wrist. On the 20th of January, at three o'clock, p.m., while sitting up in bed, he suddenly called for his wife, as he felt he was dying; but before she could reach his bedside, he had breathed his last. All the morning he said that he felt he was dying. He had no hæmorrhage from either mouth or nose. His wife said that the moment he died all signs of the tumour suddenly disappeared.

Permission being given, a post-mortem examination was made next morning, at twelve o'clock, in the presence of Drs. Smith 23rd R. W. Fusileers, Hassard, &c.; and Drs. Phillips and Going, of London.

When the integument was dissected off both sides of neck and chest, the outline of the tumour immediately became apparent. The platysma, sterno-mastoid, omo-hyoid, and the other thyroid muscles, over the tumour, were pale and flattened, and formed part of its outer-wall. The parietes of the sac were very thin, and in one part, near its apex, seemed disposed to ulcerate. The sac was empty; it occupied the whole of the ant. and post. infr. triangles of the right side, and extended over the thyroid body to the mesial line. When the sternum, with both clavicles, were carefully raised, it was seen to extend beneath the right sterno-clavicular articulation, which formed part of its anterior wall, and was firmly adherent to it, as also the first bone of sternum, the posterior surface of which was partly absorbed. The pouch adhered in part also to the sternal end of first rib; and close to this adhesion there was a small irregular aperture, about three or four inches in diameter, by which the interior of the pouch communicated with the right pleural cavity. This, doubtless, had been the channel of the copious hæmorrhage into the pleural cavity. The posterior third of that cavity contained an immense coagulum of blood, and the remainder was completely filled with serum, which trickled out the moment the sternum was raised. Just above the adhesion to the rib, the

pouch adhered to the substance of the lung, over a space about an inch square, and here the parietes of the artery seemed wholly wanting. Every other portion of the lung was perfectly healthy. It was pushed over to left side, and overlapped the pericardium. The tumour terminated at the commencement of the arteria innominata, which evidently was the first seat of the disease. The ascending portion of the arch of the aorta was much dilated, and studded with ossific deposit. This was more perceptible in its transverse portion. None could be discovered at the valves of heart, which was of the natural size.

The tumour lay on the right common carotid, jugular vein, and brachial plexus, and was commencing to ulcerate the bodies of fifth and sixth cervical vertibræ. The calibre of the left carotid and subclavian arteries was much diminished. Around the origin of the latter vessel there was a good deal of ossific deposit, which possibly may account for the difficulty of feeling the left pulse. All the other viscera in the body were healthy.

ART. XLVII.—*Red Discharge from the Vagina of an Infant only ten days Old.*—By S. J. STRATFORD, M.R.C.S. London.

THE following anomalous and very unusual case may perhaps find a corner for insertion in the *Journal*. It is curious in itself, and not uninteresting to the medical practitioner, impressing upon him the necessity of carefully watching the absurd, and not often dangerous interference of the nurse in the management of very young infants.

During the month of August last, I was called to a lady who was in labour with her first child. The pains were rather severe. Upon examination, I found the uterus but slightly descended into the pelvis; the os uteri was firm and but very partially dilated. After the lapse of three hours, the uterus had gradually descended; the os uteri was found considerably dilated, and the membranes having ruptured, the feet were distinguished as having arrived low down in the vagina. The pains soon forced the body also through the os uteri, but the arms and head were temporarily arrested by the neck of the womb. The arms were brought down by the hand, and having placed the head in its proper position, and introduced the finger into the mouth, it required very considerable force and some time, to accomplish the passage of the head through the unyielding os uteri. During this time, the lungs of the child were evidently inflated with air, and a faint cry was distinctly audible. After considerable exertion, the head at last passed into the vagina, and the infant was soon after born.

The lady suffered no more than ordinary inconvenience from her delivery, and was gradually restored to perfect convalescence.

The infant, a female, also seemed to do well until the fourth or fifth day, when the nurse complained that the breasts were greatly swelled, and as she said had milk in them. She had tried to draw the breasts, and to disperse the swelling had used considerable friction; and when she called my attention to the breasts they were red, hard, considerably swelled, and evidently inflamed. This state continued for several days. The child had some gentle medicines exhibited, and tepid evaporating lotions were applied; but nevertheless the breasts put on all appearances, that they would suppurate: from a continuance of the means above mentioned, however, by degrees the hardness subsided, and the swelling gradually disappeared. A few days after the breasts had become hard and swelled, and had been unwarrantably irritated by the nurse in endeavouring to draw the milk, a discharge of blood from the vagina occurred. It was perfectly red, and I should think amounted to nearly a tea-spoonful in the twenty-four hours. At first it was fancied to proceed from the bowels, but upon careful examination its true source was clearly proved. It seemed to be unaccompanied by the least soreness or irritation, and continued for five or six days, and then gradually subsided, as the breasts assumed their normal condition.

The above unusual occurrence goes to prove the great sympathy existing between the breasts and the womb, even at this early period of life. The absurd notion of the nurse, that she could draw milk from the breast of an infant only five days old, in all probability induced the swelling and hardness, and that the vaginal discharge was caused by sympathy with the irritated mamma, I think cannot be doubted; for the one subsided on the abatement of the swelling and irritation of the other. The curious circumstance too, that the infant breathed in utero, was an instance of a peculiar physiological fact, which in this case evidently saved the life of the child during its protracted arrest, by the contracted neck of the womb, while the introduction of the finger into the mouth, and the depression of the chin, distinctly aided, if it was not the main cause that induced the respiratory action. It has often been disputed that a child could cry in utero, but in this instance it was plainly observed, and I think no reasonable objection can be taken to the fact.

ART. XLVIII.—*Cases of Angioloecitis or Barbados Leg, with remarks on the probable Pathology of that Disease.* By JAMES BOVELL, M.D.—Continued from No. 7, page 277.

If M. Rayer had had an elephantiasis leg before him, he could not have given a more accurate description of the morbid appearances which are present in the extreme stage of that disease. We

refer to the case of Trotman, so completely illustrative of the external appearances described. "The epidermic formation of a dirty grey colour" is not an accidental or peculiar deposit, but is a product of those changes which immediately precede the tuberculated state of the skin and the formation of the villiform and nipple-like eminences. That this is the case, we believe is proved by the fact, that this ichthyosis appears first, and then disappears as the tubercles form and the villi become prominent; all the stages were seen in Trotman's case.*

In the case of Horatio, the integuments had not yet become hypertrophied, nor had the disease advanced to an extreme degree. From striking the leg against some timber, a large ulcer formed, the extent of which is illustrated; it had been healed under the late Dr. King's care before, but being compelled to work hard, it became bad again; and having had two of his toes hurt by the tread of a horse's foot, he was admitted into hospital, and the leg amputated *below the knee*. In those cases where, from external appearances, we are certain that the skin is not hypertrophied, and where it is found that position has the effect of lessening the size of the limb, we have never hesitated to give the patient the benefit of amputation below the knee, and in no single instance have we had cause to regret the practice. In Trotman's case we could not have amputated below the knee, because there would not have been integuments sound enough, wherewith to form the flap, the tubercles existing high up on the calf; not so with Horatio, whose integuments had only just become toughened by deposit over the bulging instep, and in spots about the ankles. In the case of Best, the enormous size of the foot did not depend on deposit of lymph below the integuments, as much as to an enormously thickened and semi-cartilaginous hardness of the skin. The calf of his leg was not so large as Trotman's, but the smallest toe on Best's foot was the size of Trotman's great toe, and had lost its shape, being round, and exactly like a cauliflower.

In all the cases submitted to amputation the vessels have been more or less diseased, in some proceeding to an extreme degree both of dilatation and brittleness, rendering it necessary in these cases to include within the ligature the surrounding cellular tissue. In the case of Thomas Connell there was very great disease of the vessels; the artery was partially ossified, and very much enlarged, admitting into its gaping mouth the first joint of the little finger, and the accompanying veins were considerably dilated; notwithstanding the dilatation of the vessels, and their loss of contractility to a great extent, it is matter of surprise that there

* The drawings illustrative of these cases will be described when they are published which we hope to accomplish with the concluding portion of this article in our next issue.—ED. U. C. J.

should have been so little hæmorrhage ! When, however, we see that the effusion of inorganizable lymph consequent on repeated attacks of *Angioloecitis* compresses the surrounding parts, and only gradually distends the integuments, I think that the cause of dilatation of the vessels is to be sought in the fact of the obliteration of the smaller branches, for even some of the branches that are subcutaneous have been found enlarged considerably, while the muscular branches have not been seen, and in these cases the muscles have been extremely pale ; in the illustration of the amputated stump, these appearances are indicated ; the anterior tibial is not enlarged, nor was it or the accompanying vein in this individual case diseased ; but the subcutaneous vessels had become enlarged, apparently performing a compensatory office, for the muscles were remarkably pale, the interspaces of the muscles being occupied by thick deposits of lymph. This man had had an acute attack of *angioloecitis* a few days before his admission, and it was curious to see the different phases which the lymph was undergoing, in the calf of the leg, where the pressure was least it was still fluid, being about the consistence of thin gum arabic solution ; as it descended towards the ankle it became much thicker, and had a very strong resemblance to calf's foot jelly, between the tendons on the instep it was the same, in many respects resembling the analogous change produced on lymph, effused on the pleura, by the pressure of the ribs. In no case did the diseased condition of the veins appear alone, but was always accompanied by a similar change in the arteries ; in fact there was greater disease of the arterial system since there was not simply dilatation, but also deposit of bony plates. Dr. Graves' xliii lecture would lead us to suppose that in opinion, he coincided with those who assert that the Barbados leg of Hillary is caused by inflammation of the cellular tissue. The case is that of Mary McQuade, a poor woman, admitted into hospital labouring under an attack of fever, accompanied by considerable prostration, anxiety, and restlessness ; in addition to these symptoms she had a local affection of a very important nature ; the right leg, as far as the knee, is swelled to twice its natural size, and a large erysipelatous blotch occupies the fore part of the foot, extending over the ankles on each side ; the thigh also is increased in size, as far as its upper third, so that the tumefaction embraces more than two-thirds of the whole extremity ; there is considerable degree of tension present, and the limb, particularly along the internal surface of the leg, is extremely tender, the soreness being so great over the course of the veins and lymphatics that she could not bear the slightest touch. The disease in this case Dr. Graves asserts, had its origin from cold, and he observes—“ When a patient is exposed to cold, under unfavourable circumstances, local inflammation is generally the consequence, and it depends on a variety of causes of what description the inflammation

will *sc.*, and on what particular part it will fall. When the lower extremities are the parts chiefly exposed, inflammation of the cellular membrane of the leg is apt to ensue, or it may attack the veins *as in the case before us* constituting phlebitis, or the *lymphatics may be primarily and almost exclusively engaged*. In a few cases inflammation attacks the arteries of a limb, as in a case which has been published by Dr. Stokes and myself in the Dublin Hospital reports, where a person from exposure of the lower extremities to cold, got an attack of arteritis, terminating in mortification of the limb, and death. Exposure of the lower extremities to cold gives rise to phlebitis much oftener than to arteritis. Dr. Stokes and I have published a striking case where inflammation of the veins of the leg was produced by this cause; you perceive then that painful swelling of the lower extremities, originating in cold, may consist either in the whole cellular membrane being engaged, or it may arise from inflammation of the lymphatics, of the veins, or of the arteries. Now, when inflammation attacks in the first instance the subcutaneous tissue of the lower extremities it frequently in its progress involves the lymphatic and venous tissues, the arterial very seldom, for the arteries lie deep, and have no connection with the subcutaneous cellular membrane. There is, however, nothing more common than that *inflammation commencing in this way should terminate in phlebitis and disease of the lymphatics*. This appears to be the nature of phlegmasia dolens, that peculiar inflammation which generally attacks one, and seldom both of the lower extremities, which is most commonly observed in females, and which is characterized by swelling not pitting on pressure, by excessive cutaneous tenderness, and by a remarkable whiteness of the skin of the affected limb, accompanied by increased heat, and more or less lesion of the locomotive function. These are the principle symptoms which characterize phlegmasia dolens. The inflammatory condition of the limb causes an exudation of fluid into the cellular membrane, consisting partly of serum, and partly of lymph; this produces swelling, which is of a firm and rather unyielding character, not pitting on pressure like that which results from anasarca. After some time the inflammation extends to the neighbouring tissues, and attacks the veins and lymphatics, a circumstance which has led many others, among whom is Dr. Lee, to believe that phlegmasia dolens arises primarily from phlebitis—this however, is not borne out by the fact, nor is it true that it consists in inflammation of the lymphatics, as others have suggested; it may engage both the lymphatic and venous tissues, but it differs in many points from pure phlebitis or true inflammation of the lymphatics.—*Clin. Medicine*, p. 703. Dr. Rigby, on the contrary, defines phlegmasia dolens to be tumefaction of a limb from inflammation, and obstruction of the main lymphatic trunks leading from it. This opinion is derived from an elaborate dissection of a

case by Mr. Nordblad. The patient was single, excessively deformed in her back, and with the peculiar unhealthy appearance of persons thus affected; her labour had been perfectly natural, but on the following day she was seized with rigors, followed by flushing, a quick pulse, and abdominal pain; these symptoms were in a great measure relieved, and she appeared to be slowly improving. On the ninth day after labour she first complained of pain at the outside of the left thigh, extending from the ilium to the knee, very exactly, in the course of the inguino-cutaneous nerve; it was tender to the touch, but there was no pain on pressing the femoral vessels at the groin. On the following day the pain and swelling of the thigh had increased, but still no pain was to be detected on pressing the femoral vessels; leeches were ordered, but she sunk immediately after their application, and died early next morning. Upon examination after death, the body was found much attenuated, the left thigh one-third greater in circumference than the right, abdomen tympanitic, not tense, parietes very thin, the lower part of the ilium, caput coli and arch of the colon contained air; a streak of inflammation was delineated along the anterior surface of the colon from the centre of the arch, throughout the descending portion of this intestine to the left of the iliac region; it was marked by a transverse band of capillary vessels, minutely injected in the thickened peritoneum along the whole of its course. A few convolutions of the small intestine were smeared with recent lymph, and one fold was found to adhere closely to the left side of the pelvic peritoneum at the point of reflexion of the ligamentum laterum uteri. A few small portions of coagulable lymph were also found loose amongst the intestines. At the posterior surface, and left side of the body of the uterus soft lymph and pus were effused for the space of an inch beneath the peritoneal covering of this viscus, the membrane itself being highly vascular from inflammation, but still shewing the effusion through its texture, the fundus of the uterus where it receives fallopian tube and round ligament attached was similarly affected, though in a slight degree, lymph and pus were effused here also. From these two points the inflammation appears to have spread to the rest of the serous membrane, from the first indicated point it progressed along the posterior fold of the broad ligament to the surface of the rectum and colon; from the second situation the round ligament and fallopian tube have formed the continuous line of its progress. On raising the peritoneum from the iliac fossa, the cellular membrane which envelopes the round ligament, where this cord is about to pass under the epigastric vessels, after the quitting the peritoneal cavity was found infiltrated and condensed with lymph and pus.

The whole of this cellular membrane (which it will be borne in mind is the fascia propria of Sir Astley Cooper, and which fills the femoral ring, and moreover forms the medium of transmission

for the lymphatics of the thigh) was in the same condition, densely matted by lymph, and containing pus in the interstices. The lymphatic glands in the groin were slightly enlarged, and some serous fluid was effused in the surrounding tissue. The femoral vein and artery were free from disease, the inner coat of the former vessels, as well as the internal and external iliac veins and vena cava, had not the slightest trace of increased vascularity or thickening. The chain of glands from the femoral ring along the course of the iliac vessels and aorta on the left side, were enlarged, soft, and vascular. Several of the lymphatic bodies contained between the layers of the meso colon, were found enlarged, and contained soft lymph. Dr. Lee, on the contrary, has declared phlegmasia dolens, to be a phlebitis, and has been supported in his opinion by various practitioners. This, however, is not a question on which we are at present disposed to enter, all that we wish to do is, to prove that Mr. Rigby's case was the acute stage of that disease frequently seen with us, and which taking its rise in the abdomen, becomes often fatal, but when attacking the lymphatics of the lower extremities, gives rise to elephantiasis. In this case, as in others, we see the defects arising from nomenclature, and there can be no doubt but that various diseases have been classed and considered as elephantiasis which are entirely different, and possess distinctive pathological traits. If uniformity of symptoms, accompanied and followed by constant and persistent pathological phenomena; be any evidence of the character of a disease then do we affirm that there is no disease whose symptoms are more uniform, and where the pathological phenomena are developed in such regular progression. It is not that we have an enlargement of the limb resulting from inflammation of this or that tissue indiscriminately. We do not witness the consequences of "Barbados leg," proceeding from phlebitis, nor does phlegmasia dolens, which is also observed in Barbados, entail on the sufferer the hideous and misshapen deformity of elephantiasis; and where is the proof that such changes arise from cellular inflammation, or as it has been more correctly called, *angioboleucitis*. But as we learn from Best's case, and as has been witnessed in other cases, the morbid enlargement may be confined to the integuments, constituting to all appearance true hypertrophy of the skin, and it is astonishing to witness the enormous thickening with scarcely any change within the blood vessels or muscles of the leg; and if we are to credit the researches of Breschet, and the pathological dissections of M. Andral, the skin has the requisite organization, rendering it, in common with other parts of the body, susceptible of the disease. It is to be borne in mind, that it is only in those cases where the deposit has taken place in the subcutaneous and intermuscular cellular tissue, that the diseased state of the vessels is perceived.

(To be continued.)

Review.

A Treatise on the Inflammation of the Eyeball. By ARTHUR JACOB, M.D. Dublin, 1849. 314 pages, 12mo.

THE Work here presented to our consideration, is from the pen of a veteran in Ophthalmic Surgery, a department which he has studied with no ordinary degree of zeal, and enthusiasm; whose reflections consequently are deserving our most attentive perusal. The book is intended as an introduction to the study of Diseases of the Eye, and is well worthy of the careful attention of the student and general practitioner: it was especially written for their consideration, rather than that of the professed oculist. He says in the preface that "This I do, because I think the study of these diseases should be restored to its original conspicuous place amongst the most favoured topics of medical instruction, rather than abandoned to a more limited cultivation"—a resolution deserving our most cordial approbation, and the encouragement of the profession generally. There is nothing in the study of the diseases of the eye, to deter the diligent student from fully comprehending the subject in all its bearings, if he has been sufficiently grounded in the minute anatomy and the physiology of the organ; the general laws of pathology will easily illustrate its diseases, and present him from time to time, with demonstrations of the several changes in the derangement or destruction of the nutritive process, incident to disease, which cannot be witnessed in other parts of the body.

The work is entitled, "A Treatise on Inflammation of the Eyeball," and certainly the description of the several varieties are graphic in the extreme—in it all the tissues of the organ participate: it may commence in one, but soon spreads to others, implicating their organization with variable intensity—as is very apparent in the individual parts as the disease progresses. The subject-matter, however, might be more advantageously arranged for the student who would most decidedly be better able to comprehend the description, and to recognize the extent to which disease in the several tissues proceeds, had he fully learned to comprehend them in each individual texture, as a distinct disease.

One fact curious in itself, and probably the cause that has led to the adoption of this plan, is that inflammation of the eyeball is said to occur comparatively more frequent in Ireland than elsewhere.

The several varieties of inflammation of the eyeball, are possibly dependent upon some chemical condition or poisoning of the blood, in which the whole mass of that fluid participates; which explains, that should disease be lighted up in one of the tissues of the eyeball, it is the more likely to spread to the others, and thus involve the whole organ; but even here, the several poisons appear to be more especially inimical to individual tissues; thus we have

the sclerotic coat, suffering especially in the gouty and rheumatic varieties—while in the syphilitic, the iris appears to be principally its seat. In the first chapter, we have a description of inflammation of the eyeball, as it generally occurs in Ireland. The progress and general character of the symptoms here detailed, do not bear the impress of acute phlegmonous inflammation, their march is far more tardy, and the results arrived at in the progress of the complaint, although sufficiently grave, have not the intensity which is often witnessed in acute inflammation of the eyeball—the rapid plastic deposits, and speedy ulceration and evacuation of contents of the globe, is not marked among the results; in fact, it is evidently a variety modified by that state, and chemical composition of the blood, which seems to prevail so generally in Ireland, and which so largely predisposed to fever; and this conclusion is the more probable, from the fact that we find a chapter immediately succeeding, on inflammation of the eyeball following fever, in which we cannot challenge any variation in the symptoms, that should lead us to recognize it, as a distinct disease from that previously described, only that it appeared as a sequela of fever. The same peculiar condition of the circulating fluid, was in all probability present in both cases; therefore we think it not unreasonable to conclude, that the same peculiar and wide spread condition, which so frequently causes fever to be rife in Ireland, is probably the reason that inflammation of the eyeball, so generally takes this character in that country. If these facts are correct, the student must bear in mind, that in other more favoured regions, or under other local circumstances, inflammation of the eyeball may present far more urgent symptoms, and in its treatment demand more active means than have been suggested by Dr. Jacob.

The succeeding chapter is dedicated to Syphilitic Inflammation of the Eyeball: the detail of the symptoms, and the prognosis of the disease, are somewhat meagre; while the treatment by bleeding, mercury, spirits of turpentine, and hydriodate of potash, are fairly pointed out, and worthy the attentive consideration of the practitioner. A point of some importance, and not generally known, is that syphilitic iritis may manifest itself in the infant, as a secondary symptom, dependent upon primary disease in its parents. We conceive that we cannot do better than quote the author's own words. At page 97 he says:—

“Syphilitic inflammation of the eye is sometimes although rarely met with in infants; and it may be assumed that its rare occurrence is to be attributed to the comparative infrequency of syphilitic disease at this time of life. The practitioner should therefore bear in mind the possibility of the existence of such disease, when called upon to attend infants suffering from disease of the eye, or its future appearance in those labouring under symptoms of syphilis without any present appearance of iritis. This it is

necessary to inculcate, because syphilitic inflammation of the eye sometimes takes place in infants, as in adults, unaccompanied by any other form of the disease, and is sometimes accompanied by such slight increase of vascularity or other appearance of disease, that it may escape notice. In the early stages, redness of the sclerotic, discoloration of the iris, and irregularity of the pupil, are the appearances to be observed; and at a more advanced period, alteration in the shape of the sclerotic, and cornea, contraction of the pupil, and adhesion to the margin of the opaque lens, sometimes a dilated and irregular pupil, with a transparent lens, is the consequence; but in other cases, where the disease has escaped observation, or has been neglected or mismanaged, insensibility of the retina, or amaurosis and consequent blindness remain. At this time of life, little information as to the extent of the disease can be obtained from trial of the visual power of the organ. The baby will grasp at a watch, or other bright object presented to it, as long as any degree of sight remains, but slighter defects of vision can scarcely be detected. It is therefore necessary to make a careful examination of the eye, and close enquiry as to the presence of syphilitic disease, or of its previous existence. I see these cases oftener after the mischief has been done, and the organ destroyed, than during the commencement of the attack, when it might be saved; yet even at this period, the emaciation or defect of nutrition, arrested growth, and palid dingy skin, proclaims the nature of the disease; and sometimes other forms of it, even now, may be detected. I was lately called upon to see one of these cases, considered to be simple cataract, in a child then three years old. The pupil was contracted, and adherent to an opaque lens and capsule, and vision was irreparably destroyed. This occurred when the child was only a few months old, yet on examination I found the tongue studded with small irritable ulcers and clefts, and a soft condylomatous elevation at the anus, which speedily disappeared after the administration of some hydrargyrum cum creta. The treatment of syphilitic inflammation of the eye in infants, does not differ from that prescribed of adults, except in degree. Mercury and the local application of the extract of atropa belladonna during the existence of the inflammation, and tonics, alteratives and generous diet, should the disease linger, constitute the principal resources. Of the preparations of mercury, the hydrargyrum cum creta appears the most appropriate and convenient, and in acute cases it may with advantage be continued at first with James' powder, or other manageable antimonials. Sarsaparilla, iodine, and bark, can be resorted to as auxiliaries, if necessary."

Next follows a chapter on that rare and anomalous disease, inflammation of the eyeball, attendant upon gonorrhœa. This disease of the eye is invariably attended with swelling of the joints and acute pain, often migratory from one to the other, as in acute

rheumatism, attacking the fibrous structures of the body; the sclerotic coat of the eye is liable to be more or less implicated, as a variety it may commence in that texture and by degrees spread to the other tissues. The cornea may become opaque, the iris contracted and adherent, and not unfrequently opacity of the capsule of the lens occur. These are, however, but secondary affections, marking the progress of the disease; the fibrous tissues of the joints are evidently influenced by a similar affection, soon implicating the serous tissues, hence the swelling and effusion—even the gonorrhœal discharge would seem to depend on a similar influence, engaging the urethra, and spreading to the mucous membrane, hence the discharge, which occurs less as a cause of venereal infection, than as the result of the constitutional condition.

The presence of a discharge from the urethra, which in some of these cases appears to have been the natural or supposed result of venereal infection, naturally led to the supposition that the affection of the eye was caused by that disease; but when we have cases in which the urethral discharge has occurred without any suspicion of venereal infection, and where it was attended with other symptoms, which indicate an affection of the fibrous tissues in other parts of the body, we must hesitate to pronounce this complaint of the eye, as a secondary symptom, the result of gonorrhœal infection; and moreover when we find that the peculiar state of poisoning of the blood, which occurs as the cause of rheumatism and gout, gives rise to a disease of the eye, identical in character and appearance, we are naturally led to conclude that the disease of the eye, and the affection of the Urethra, are but complications of the disease of the fibrous tissues caused by the poison.

The two succeeding chapters are occupied with a description of rheumatic and gouty inflammation of the eyeball. In these the fibrous coat appears distinctly to suffer as a primary condition, and the disease spreads, with more or less celerity and intensity, to the other textures of the eye. It is possible that a practised eye may be able to appreciate some slight difference in the symptoms, and appearance, of these different diseases, but Dr. Jacob has failed to indicate any in the histological description which he has given; and the only real evidence is the appearance of gout or rheumatism in some other parts of the body. Doubtless inflammation of the eyeball occurring in a system charged with the poison which causes gout or rheumatism, may be suspected from the lithic deposits in the urine, &c., and the disease of the eyeball pronounced upon accordingly. Dr. Jacob very correctly remarks, page 143, "If, as I have stated, the specific nature of the inflammation cannot be positively ascertained from the changes in structure which takes place during its progress, or from the sensation of the patient, it remains to be determined whether it can be ascertained by any

other means. As I stated with respect to rheumatic inflammation of the eye, so do I with respect to the arthritic, that it cannot be with certainty recognized as such, unless there be unequivocal evidence of a gouty diathesis in the system, either from present symptoms or previous paroxysms." This is a pretty clear confession, that it is to the character of the poison we shall have to refer for a solution of the nature of the disease, and we doubt not that ere long chemistry will supply us with tests, that shall indicate its character and amount, long before its peculiar effects are recognized in the system in the shape of disease

In serofulous inflammation of the eyeball, which follows next in succession, we have another disease of this organ dependent upon peculiarity of constitution. Here, we presume, that the blood is again at fault, and that tubercle is the result of effusion from the congested blood-vessels. The effused plasma here takes on the changes peculiar to the formation of tubercle, in other parts of the body; this by degrees softens, and a discharge of pus is the result; and that generally escapes through the sclerotic coat by slow degrees. The junction of the cornea with the sclerotic coat, appears to be the most common seat of this deposit. It may extend into the anterior chamber, and protrude externally under the conjunctival membranes, causing considerable elevation of the part. The matter seen through the cornea looks of a yellowish tint; and although situated at the superior margin, and hanging down into the anterior chamber, does not mix with the aqueous humour, or descend to the bottom of the eye, as an hypopion, but we find it rather protruding through the sclerotic coat, and that long before the anterior chamber is filled. There is comparatively but little inflammatory action present, and that of a chronic character, apparently caused by morbid deposits; while for the amount of disorganization there is remarkably little pain; symptoms that appear to us, as pathognomic of this variety of disease. At page 170 Dr. Jacob clearly points out these facts. He says,—“In my practice, I have so often met with cases similar to those here quoted, in persons of serofulous constitution, and even suffering from glandular disease of that character, that I think there can be no doubt as to the nature of the malady. In one, an unmarried lady of about twenty years of age, the whole eyeball became filled with a firm yellowish mass, presenting all the appearances of serofulous tubercles, and suppurating at several points, so that I could pass a probe in different directions, nearly from one side to the other. This disease must not be confounded with that variety of conjunctival irritation denominated serofulous ophthalmia.”

Dr. Jacob next enters into the consideration of inflammation of the cornea, retina, and choroid coats,—all of which he demonstrates as individual entities,—although, especially the two latter, seldom occur unaccompanied by affections of the other tissues.

of the eye. His description of these diseases is lucid, and worthy the careful consideration of the practitioner. With regard to the diseases of the crystalline lens, which follows, we do not consider him so happy in his deductions, or so fortunate in the explanation of the anatomical structure of the part, from the consideration of which, he endeavours to substantiate the fact, that inflammation of the lens is the cause of cataract. Dr. Jacob maintains that the crystalline lens is vascular, having blood-vessels passing into its structure; which, however, he confesses not to have seen, but which he assumes to exist from analogy. The great light thrown upon anatomy and physiology, by the microscope, goes distinctly to prove that these views adopted by Dr. Jacob are erroneous. He seems to fancy such might be the case, from the opinion of several authors whom he has quoted. He does not however, candidly confess, that if the views of microscopists are correct, inflammation of the lens cannot have an existence. The lens is a distinct cellular formation; and from the arrangement of its structure assumes a fibrous character, and can only be influenced in its diseases by endosmosis and exosmosis. That inflammation of the capsule of lens is a disease perfectly demonstrable, is equally certain; and that it is liable to all the changes and derangements of nutritive action attendant upon this variety of disease, is also clearly obvious; but that it can act upon the lens otherwise than in an indirect manner, is not so certain.

Inflammation of the eyeball from injury and phlebitis are then considered. The first is, of course, dependent upon the extent of the injury, the character of the tissue implicated, and the peculiarity of constitution present at the time. The latter is most frequently a secondary affection, and is generally combined with inflammations of the veins in other parts of the body. As such it is a disease of the most formidable character, and when very extensive, most commonly fatal. Inflammation of the ophthalmic vein, being rather a rare disease, and its symptoms seldom duly appreciated, the following case recorded by Dr. Lee, in the 28th volume of the *Medico-Chyrurgical Transactions*, may serve to illustrate its nature:—"Ten weeks after delivery, and six after the commencement of uterine and crural phlebitis, the conjunctiva of the right eye suddenly became so much swollen and inflamed, that the eyelids could not be closed, and a copious secretion of an opaque fluid took place from the inner surface. The cornea soon became opaque, and vision was entirely lost two weeks before death. There was little pain or intolerance of light. The left eye became similarly affected, without much pain; and both were so much swollen that they appeared to protrude from the orbits. The vena cava, internal and external iliacs, and femoral veins, had all undergone the usual change of structure which result from acute inflammation."

Some remarks on neuralgic inflammation of the eyeball, brings to a termination the views of Dr. Jacob, as expressed in the volume before us. Considering this subject," he says, page 336, "in certain forms of inflammation of the eye, the pain is evidently disproportioned to the amount of inflammatory action, resembles more the agony of toothache, and takes place more in pangs and paroxysms. It also has regular periods of intermission, or irregular remissions, and is exasperated by light. At the same time the eye becomes intensely red, vision is nearly lost, and luminous spectra, with scalding lachrymation, add to the patient's sufferings." That the peculiar derangement of nervous sensation, generally recognized as neuralgia, is a frequent attendant upon diseases of the eye, must have been observed by most surgeons. That hyperemia or congestion of the blood-vessels of the eye, is frequently an attendant upon disease of the fifth pair of nerves, must also have been observed. In almost every case of *tic dolooureux*, implicating the ophthalmic division of the fifth, we have great intolerance of light, and profuse lachrymation,—symptoms indicative of the sympathy of the parts to which the nervous fibrillæ are distributed; the formation of the lenticular ganglion, from whence proceeds the ciliary nerves, distinctly explains the cause why the iris participates intensely in this affection. That the iris is the seat of the intolerance of light rather than the retina, I think may be shown, when we observe its great susceptibility to the influence an influence light, sympathetically agreeing with the retina. Cases of complete amaurosis have occurred when the retina was totally insensible to the stimulus of light; but when we find the iris still enjoying great motive power—contracting upon the admission of light into the eye—and acting as though the retina still acknowledged the natural stimulus, a fact clearly demonstrating that the branches of the ciliary nerves, distributed to the iris, have a sensibility peculiarly adapted to receive the impression of light. Under these circumstances, I think that it is but a natural conclusion to acknowledge, that the intense intolerance of light, attending most cases of scrofulous ophthalmia (as it is called), is only a species of neuralgia of the iris, attended with some derangement of the circulatory apparatus,—sometimes the cause, sometimes the effect, of this peculiar disease. The length of time this disease will remain, its frequent return, without producing an amount of disorganization proportioned to the severity of its symptoms, will also indicate that it is the nervous, rather than the vascular system, which is the seat of the disease. Dr. Jacob says, page 337, "I have often been astonished to find the eye, which for three weeks or a month had been intensely red, with severe intermitting pain, intolerance of light, scalding lachrymation, and alarming defect of vision, little injured after the inflammation had subsided,"—facts in themselves sufficient to show that the derangement of the nutritive function, the effect of inflammatory

action, was not present to any great extent; for we often witness but the slightest of the effects produced by that morbid process. The conclusion we think warranted in arriving at is, that the several tissues of the eye supplied by the fifth pair of nerves, and lenticular ganglion, are liable to be implicated in neuralgic diseases; and that the ciliary nerves distributed to the iris occasionally, indeed not unfrequently, are the seat of that intolerance of light which, is an exaggerated amount of its natural sensibility, and which we have not unaptly designated, *neuralgia of the iris*.

We confidently recommend the book to the notice of the student and practitioner. They will find much in it of great practical value, and a little reflection will soon enable them to discriminate between what really possesses this character, and what may be the result of speculative reasoning, arising from the author's individual or preconceived physiological opinions.

Correspondence.

MIDDLESEX MEDICO—CHIRURGICAL SOCIETY.

THE monthly meeting was held at the residence of Dr. Phillips, on Tuesday evening, Feb. 3rd, the following members being present: Dr. Anderson (President). Drs. Phillips, Moore, Farmer, Holmes; honorary members Brown 23rd Regiment, and Hassard, Royal Artillery. Dr. Brown read the report of a case of aneurism of the arteria innominata, and illustrated it with a beautiful preparation of the artery and sac taken from the deceased.

Some discussion then took place, relative to the notice contained in the U. C. Medical Journal of January last, respecting the Canadian Eclectic Medical Association, held at Brockville.

The following resolutions were passed unanimously.

Resolved 1. That the members of this Society, having had their attention directed to the notice of a meeting of a Society styling itself "The Canadian Eclectic Medical Association," held at Brockville, C. W., on the 24th September last, do consider it their bounden duty as legally qualified practitioners of medicine and surgery, to express publicly their unqualified dissent from, and their utter disapprobation of any such illegal association.

Resolved 2. That this Society unanimously concur in the proposition made in the U. C. Medical Journal, of forming a Provincial Medical Association to watch over and protect the interests of the profession; as by union and concentration of strength, the Faculty of Canada West may finally be enabled to obtain from the legislature of this Province, that protection of their rights and privileges granted lately to their professional brethren of Canada East.

(Signed)

ALEX. ANDERSON, *President*.
G. HOLMES, *Sec. & Treas.*

London, Feb. 4, 1852.

TORONTO, FEBRUARY 16, 1852.

THE MEDICAL BOARD, CANADA WEST.

WE take up, according to promise, the consideration of the statutes by virtue of which this Board is constituted, and under the authority of which its prerogative is exercised.

It would appear, that in 1814, an act was passed, entitled "An Act to license practitioners in Medicine and Surgery throughout this Province, and to make further provision for licensing such practitioners." This act was wholly repealed by another passed in 1818, during the 3rd session of the 7 Geo. III., chap. 13; and the 3rd and 5th clauses of this latter Act were repealed by a subsequent one, passed in 1819, during the fourth session of the 7 Geo. III., chap. 2. It is under the unrepealed clauses of the second, and the provisions of the last Act, that the proceedings of the Board are transacted. We asserted in the remarks published in our last number, that an unsuccessful attempt, had been made at a recent meeting of the Board, to raise the standard of medical education, by establishing a certain curriculum of study, with which all candidates for license should be required to produce evidence of having complied, and also to regulate the mode of examination. In general terms it may be stated, that that curriculum included a complete elementary education and attendance for a given time upon certain prescribed courses of lectures, such as are usually required by corporate bodies authorised to grant *ad practicandum* degrees in medicine and surgery. The proposed regulations with respect to the examinations were to the effect, that these should be conducted partly by written questions and answers and partly *viva voce*. The objectors to these changes in the system hitherto pursued, raised the question of the power possessed by the Board to make such regulations under the Act. It was also objected, that the system of writing his answers might tend to embarrass the candidate, and would occasion great practical inconvenience, from the delay which would necessarily attend such a proceeding, by which the time of the examiners might be unduly occupied. It was even averred that it was probable a certain proportion of of the candidates would be unable to comply with this requirement. We propose to discuss these objections, and in doing so, we desire to disavow any intention of reflecting upon the reasons or motives of those who entertained them. A free discussion of these points will, we believe, be productive of good;

and while we respect the conscientious opposition of men whose opinions are founded on conviction, we may be permitted to question the accuracy of the reasoning by which they have arrived at, what we regard, as erroneous conclusions.

The second clause of second Act above mentioned, provides the appointment of five or more persons as a board, three of whom to be a quorum, "to *hear and examine* all persons desirous to apply for a license to practise," "and *being satisfied* by such examination that any person is *duly qualified* to practice, to *certify* the same," whereupon the Governor is authorized to grant the license.

The 4th clause of the last named act provides "That every person desirous of being examined by the said Board *touching his qualifications* for the practice shall give due notice to the secretary, &c." It is evident that these acts appoint the authority to *hear and examine* and to *certify* the qualifications; but it is remarkable, that they make no allusion as to what those qualifications shall be. The power here implied is unlimited. In the construction of an act of Parliament, where the literal meaning is ambiguous, it is usual to accept what may reasonably be deemed to be implied by the language employed. Far from being restricted in the powers conferred by such wording, we conceive that the Board might, with every degree of right, establish any standard which seemed to it necessary, even if this were to include a knowledge of the Hebrew or Choctaw languages! Nor could such a regulation be considered unreasonable by the candidate, *provided its existence was made known*, for the law prescribes that every one *desirous of being examined touching his qualifications* for the practice—What qualifications? Those appointed by the persons who are to *hear and examine* him. He knows that he must submit to this ordeal before he can procure his license, and it is necessary, and his duty, so to prepare himself that they whose office it is to *certify* to his qualifications may be *satisfied by such examination*.

But the Board it would appear has already recognized the power of making its own regulations under these statutes, and has established a precedent, by passing a rule that each candidate shall be required to adduce evidence of having been engaged at least three years in the prosecution of his professional education. By this rule the principle is avowed, and it is ridiculous to object now to its application to a complete modelling of that education which this rule acknowledges to be necessary. It is only a question of degree, and one which should never engage the attention of the Board where the expected results of its action will be so important and beneficial.

The consideration of this question certainly leads to the conviction, every day becoming more confirmed, that the interference of the legislature is required, to place the medical profession on a

proper footing, by conferring on its legally qualified members the right of regulating its affairs in all that appertains to education and internal government. In the absence of such extended privileges, it becomes the duty of those to whom this trust is at present confided, to fulfil it faithfully, by exercising their high prerogative with a jealous care for the interests of the profession, and the safety and welfare of the community. And in what better manner, we may ask, can they discharge this duty, than by providing for, and insisting upon, the efficient education of those who seek to assume the responsibility (and what a fearful one it is) of managing and combating the manifold diseases to which by nature and accident their fellow creatures are liable.

The experience of all who have passed through the ordeal of a professional examination, must have established the fact, that it was not so much the matter of the interrogatories which tried their fortitude, as the manner in which those interrogatories were put, and the consciousness of the extent or deficiency of their own preparation. A natural timidity of disposition would undoubtedly render them more liable to embarrassment and confusion, a circumstance easily perceived by, and generally eliciting the sympathy of, a conscientious and practised examiner. Nor can it be denied that the embarrassment of a candidate is very frequently much increased, by the difficulty which he may experience in expressing himself, under the circumstances, with that clearness and precision, so necessary to a complete revelation of his knowledge; a difficulty which presents itself to many in less critical positions—even in the ordinary intercourse of social life; and doubtless the familiarity of the observation, that many men can commit to paper with greater facility, that which they wish to impart to others, than they could speak it, first suggested the system of written answers, now very generally adopted by examining bodies. The time and opportunity for reflection, without the risk of misconstruction to which any hesitation in verbal reply might possibly give rise, is an advantage of material value to one, on the accuracy of whose answers so much of vital importance to his future prospects is contingent. We are convinced that there are very few who would not gladly avail themselves, if the option were permitted, of the opportunity of quietly sitting apart, and transcribing the results of their study and observation by a deliberate exercise of their powers of memory.

For the plea of the time which would be required to carry out this system of written investigation, we can perceive no good foundation, if the provisions of the act are strictly enforced. The 3rd clause of the last act provides that “the Board shall be held on the *first Monday* in January, April, July, and October, and *may be continued by adjournment* from day to day until the business before the Board is finished,—provided no one sitting shall be so continued

beyond the Saturday in the week in which such sitting shall commence." And by the 4th clause the candidate is required to give *due notice* to the Secretary." Now, it appears to us that the *Monday* of the week is the *only day*, on which applications for examination can be entertained, and that of these *due notice* must have been given. As in the case of the nature of the qualifications, so it would seem with respect to the notice, that it is the implied prerogative of the Board to assign what shall be considered *due notice*, no provision being made for it in the statute. If this be properly regulated—and we conceive that it would be only consistent in the Board to name a sufficient time, as by reference to the list of its members we perceive that some of them do not reside in the city, no want of preparation on the part of the examiners need exist; the requisite number of questions for each candidate might easily be constructed at their own convenience. We understand that the notice hitherto demanded has been only twenty-four hours, a period certainly too brief for this purpose, and more particularly for notifying non-resident members of the Board. The names of all who intended to present themselves on the *Monday* having been in the possession of the Board for some time previously, it would be but a simple matter of arrangement, by which the candidate should be allowed ample time to answer the written questions of each examiner. Let us suppose, for the purpose of illustration, that six candidates present themselves, on Monday the sixth of April, to each of whom six questions are given in anatomy for example: they should be required to write their answers in the presence of the Board, and if the practice of British Institutions is followed, they will be limited to a certain time, say an hour. On completing their answers on the first subject, a second set of questions on some other department would be provided to them, and so in rotation until the six or seven departments were exhausted. Now as the Board meets at noon, and seldom separates, if there is any business before it, until four or five o'clock, five subjects would be answered by all the candidates on the first day, and if it were deemed expedient, the whole series might be completed on that day; and this would not interfere with the other engagements of the examiners, to a greater or even to the same extent that the present mode does. Such a method would permit of the occasional absence of several of the members during a greater part of the time; for provided one was present only, he would be sufficient for the purpose of preventing intercommunication: nor could any inconvenience arise from adjournment, as the candidate would not be aware of the nature of the next series of questions to be submitted to him. The answers might be examined by each examiner at his leisure, during the evening or on the next day, when the viva voce examinations would be proceeded with.

On the subject of the day, and the power of adjournment, the law is very explicit. *Monday* is the day appointed—the adjournment is to be *from day to day*, for the completion of the business *before the board on that day*. Any departure from this practice must be illegal. We are given to understand, that at present the practice is to assemble on the Monday, and to adjourn from day to day during the week, permitting candidates to offer themselves on any day during the week, having we presume first given the required twenty-four hours' notice.

With reference to the objection, that a number of the candidates might be unable to comply with this requirement, we blush to think, that there should exist any ground for entertaining such a belief or opinion, or that it would be contemplated to admit to the privileges of the profession men who could not write their mother tongue. Indeed we are at a loss to conceive how any examiner could conscientiously *certify* that a candidate possessed the requisite qualifications who lacked this great and primary element of education. It is to be hoped, that if there be any who are now engaged in the study of medicine who would fall under this category of candidates, they will at once either abandon the idea of prosecuting the study, or by a rigid course of self discipline and instruction acquire a knowledge, without which they will in vain seek to render themselves respected by those whose entire good opinion and confidence it is essential they should gain, if they hope to practice medicine successfully. By admitting such a class of men as this objection prefigures, the strongest barrier to the commission of crime would be removed—crime which although glaring in its nature, and fearful in its consequences, is but little regarded in the moral code of the progressive spirits of the age—we mean the crime resulting from a presumptuous and ignorant discharge of duties and functions for which they have received no proper educational preparation. Look at the man who with all the advantages of a liberal education, embarks his capital and engages in some speculative undertaking of the true nature and risks of which he knows nothing—how certain and signal is his failure. But to him alone the consequences are serious and prejudicial, or if his rashness should have involved others, the loss is a pecuniary one, which experience and prudence may repair. Yet the world punishes him with ridicule and censure. If an artisan should undertake to construct some mechanism, being ignorant of its principles, and unacquainted with the use of the requisite tools—the law punishes him for the injury done to his employer by the waste of material, and breach of contract. But on him only falls the penalty of his wayward presumption;—and so through nearly all the ramifications of the social scale. But, if a man, who one day is a journeyman hatter or a stage coach driver, the next day dubs himself a

doctor, a Homœopath, Hydropath or Mesmerist, the credulous world flock around him to be duped, irreparably injured, and *probably murdered*—aye, to be hastened on to a premature grave, by the administration of the most powerful and subtle agents, whose composition, whose relative affinities, whose *modus operandi* are all a dark and incomprehensible mystery, to this scelerate impostor. And what is the result of all this? If the properly qualified practitioner seeks to avail himself of the slender protection extended by the law for the punishment of the fraud committed on the public, and the injustice done to himself—straightway the public voice is raised against the proceeding and its justified instigator, whose motives are characterized as invidious, selfish and mercenary. But who shall restore the poor deluded victim to the comfort and enjoyment of his wonted health—who reanimate the cold and hapless body with its former vitality? What compensation will cheer the widowed hearth, give back again the joyous prattle of the cherished infant, heal the wound of blighted love, or bring together the severed links of fraternal happiness! And yet it is desired to countenance and promote these evils, by removing all legislative restrictions against unqualified practice, by lowering the standard of education and the cost of its acquisition, and so encourage the adoption of medicine as a profession, by those who are unprepared for the study by lacking the most elementary knowledge—a proper acquaintance with their native language, and the ability to impart information by the art of writing. We hope for a better issue, and look for a renewed effort on the part of those who are striving after the wiser course.

MIDDLESEX MEDICO CHIRURGICAL SOCIETY.

WE direct attention to the report of the proceedings of the "Middlesex Medico Chirurgical Society" on another page. It is a source of gratification to us to find, that our suggestions have met with the approbation of one County Association. We have received assurances from other quarters to the same effect, and hope shortly to see the scheme in active operation; in the meantime we would solicit further communications from our correspondents on this subject. It is only by concerted action that we can hope to effect anything, and we are confident that an impetus only is required to set the machinery in full and active operation.

OUR FATE AND PROSPECTS.

has been reported to us that rumours are afloat, how originating we are at a loss to conceive, that this Journal is to be discontinued. We can assure our friends, subscribers, and contributors, *that such is not the fact.* The next number will complete the first volume. It would be affectation in us to say, that our success has far exceeded our expectations, but we certainly have no very reasonable ground of complaint. Our present circulation is 350, and we have little doubt that, before the conclusion of the second volume, we shall have extended the number of subscribers. At the same time we would solicit those who have encouraged our first labours, to continue their support; and as prompt payment will enable the Publisher to carry out his arrangements more efficiently, we would request those who have not paid the first year's subscription, to do so without farther delay. With our next number we shall supply a general index and title-page to the volume, for the purpose of binding. If parties possessing Nos. 1 and 3, feel disposed to part with them, the publisher will purchase them at cost price.

ERRATA IN THE DECEMBER METEOROLOGICAL REGISTER.

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|---------------------|-----------------------|----------|-------------|
| Temperature | on the 22nd at 6 a.m. | for 0.4 | read — 0.4 |
| “ | on the 26th at 6 a.m. | for 7.4 | read — 7.1 |
| Minimum Temperature | | for 14.8 | read — 14.8 |
| Min. Temp. | 1840 | for 8.6 | read — 8.6 |
| “ | “ 1845 | for 2.4 | read — 2.4 |
| “ | “ 1847 | for 0.3 | read — 0.3 |
| “ | “ 1848 | for 1.1 | read — 1.1 |
| “ | “ 1849 | for 6.5 | read — 6.5 |
| “ | “ 1850 | for 9.0 | read — 9.0 |
| “ | “ 1851 | for 14.8 | read — 14.8 |

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SELECTED MATTER.

PHYSIOLOGY.

ON THE VARIATIONS OF DIFFERENT INGREDIENTS OF THE BLOOD BY MEANS OF FOOD.

By Dr. H. Bence Jones, F. R. S., &c.

[In the blood we have water, salts, albuminous substances, and non-nitrogenous organic matter; the effect of food upon these substances is very interesting.]

In the blood of man, when a mixed diet was taken, albumen 53·2 parts per 1000 parts of blood were found; on animal food, the 5th day, 58·7 parts; the fourteenth day, 62·7 parts per 1000. The fourteenth day of vegetable food, 51·0 parts albumen; showing that animal food decidedly increases the albumen in the blood, and that vegetable food does not produce so decided an effect.

With regard to fibrin: the blood of man, when no food was taken, gave 1·8 parts per 1000 parts of blood (the average being about 3 per 1000); after animal food, the third hour, the fibrin was 1·5 parts per 1000; the fifth hour 1·6, &c.; so that the digestion of food does not seem to increase the fibrin of the blood. After the eighth hour, however, when digestion must be ended, the amount of fibrin comes back to the amount which was present before food was taken.

In a dog starved for eleven days as much fibrin was present in the blood as was usually found when food was taken; and after nine days' starvation there was found as much as 2·7 parts of fibrin in 1000 parts of blood. With regard to the influence of different kinds of food, one animal was kept for weeks on flesh only, and another was kept for the same time on vegetable food only; both were bled from six to nine hours after a meal. The proportion of fibrin in the two specimens of blood was represented by 9 to 7.

With regard to the salts in the blood, there are, after twenty-four hours' starvation, 6·9 parts of saline matter in 1000 parts of blood; eight hours after animal food 8·2 per 1000; after vegetable food 7·7 per 1000.

As regards the effect of food on the amount of fat in the blood, after twenty-four hours' starvation, there are 2 parts of fat in 1000 parts of blood. The Table shows that starvation causes a gradual diminution of fat, and that food causes an increase, but in some states of disease the amount of fat is increased far beyond the healthy limit. I believe that 117 parts of fat in 1000 parts of blood is the highest ever known to have occurred in man.

The quantity of water after animal food is 784 parts of water in 1000 parts of blood, and after vegetable food 792 per 1000; so far showing that vegetable food causes a more watery state of the blood than animal food does. Still the quantity of water in the blood is not very closely dependent on the quantity of water which is taken into the system. On this point some very interesting experiments have lately been made. Two dogs were kept for some weeks on the same food, except as regarding the quantity of water given to them. One dog was not given any water, and the other was made to take a large quantity. It was found afterwards, that the specific gravity of the blood taken from the two dogs varied very little. It was almost the same in both.

Still very large draughts of water do occasionally produce very decided effects on the blood of animals. If, after the blood has been drawn, I take the blood globules, and mix them with distilled water, and then examine the liquid under a microscope, I shall find, if sufficient water has been added, that the

blood-globules have ceased to exist. Pure water has a powerful action upon them. It bursts, and breaks and dissolves them, causing them to vanish entirely. A clear solution like this of blood-globules is formed. Now the same action is said to take place in animals after very large draughts of water. It is stated that in oxen, after taking immense draughts of water, the blood-globules have been so acted upon as to become dissolved, and that the colouring matter has passed out of the body. This has continued until so much water has passed from the animal as has sufficed to restore the proper specific gravity to the blood.

I have here a liquid containing blood-globules, in a strong solution of sulphate of soda. The quantity of sulphate of soda is so considerable in proportion to the water that the globules are unacted upon. If the blood had been put into distilled water, instead of into a solution of sulphate of soda, the globules would have been dissolved, and have formed a clear, colourless liquid. It is simply the salts of the blood which hold the albumen in solution; and it is these same salts, also, which prevent the coloured globules from being dissolved.

Thus much regarding the influence of the food on the substances in the blood. You will find more on this subject in the pamphlet of Nasse, on the 'Influence of the Food on the Blood'; in the pamphlet of Mulders, on 'Nourishment'; and in 'Lehmann's Chemistry,' under the head of 'Blood.'

[Another interesting inquiry entered upon by Dr. Jones, is the relation of the blood to the substances which are passing out of the body—to the excretions.

One of the most interesting substances, and certainly the most important one, is carbonic acid, which passes out by respiration. By a very easy and beautiful experiment I can shew you its presence in the blood. I have here an apparatus which will produce hydrogen. I have a tube full of caustic potash, which will stop any trace of carbonic acid which can possibly exist. Sulphuric acid is made to act upon zinc so as to produce hydrogen; this hydrogen passes through the solution of caustic potash; it then passes into another vessel, into which, when filled with the hydrogen, some healthy blood is put; the hydrogen bubbling through this, passes through some lime-water in other vessels; and if it carries with it any carbonic acid, the lime water will of course become turbid. You see how rapidly this turbidity is produced. Carbonic acid, then, is a substance which exists in the blood, and is passing out each moment by respiration. The proportion of carbonic acid to oxygen, in arterial blood, is as 16 of the former to 6 of the latter; and, in venous blood, 16 carbonic acid to 4 oxygen. This proportion was determined for us by the German chemist Magnus. He found that the quantity of nitrogen was the same in both kinds of blood. M. Majendie states that in venous blood, in every hundred volumes, there are seventy-eight volumes of carbonic acid gas, and in arterial blood 66 per cent.

Other substances can be obtained from the blood which are constantly passing out of the body into the urine. The most interesting of these are uric acid and urea, substances which form the peculiar characteristic constituents of the urine. These can be found in small quantities in healthy blood. I have here a beautiful specimen in long crystals of urea obtained from the healthy blood of an ox, for which I am indebted to M. Verdeil. It is obtained by drying the serum of the blood, reducing it to the finest powder mixing it with alcohol, and then pouring off the alcoholic solution, which, in health, always contains small quantities of urea. In some diseases the quantity of urea in the blood is considerable—as for instance in Bright's disease. In this disease the blood-globules are exceedingly diminished—the albumen is constantly passing

out in the urine; and it is always found that urea is one of the constituents of the serum. It may be obtained thus:—Here is the serum of a patient who was bled in St. George's Hospital. Here is a portion evaporated to dryness; a part of this dry residue is treated with absolute alcohol, the alcoholic solution is evaporated in vacuo to dryness; and the dry residue is dissolved in a little water; on the addition of nitric acid nitrate of urea as you see immediately crystallises.

Uric acid is also found in the blood in health and in disease, combined with soda. It was discovered by Dr. Garrod, of University College; he states that it exists in increased quantity in the blood of gouty subjects; and, from my own experiments, I can confirm the truth of his statement. Dr. Garrod also says, that he found in Bright's disease urate of soda in excess in the blood. In that disease the kidney is prevented from performing its proper functions; the ingredients of the urine are not separated as they should be, and thus urea and uric acid accumulate in the blood. Uric acid, like urea, can easily be detected, by taking the serum or the blood as a whole, evaporating it to dryness, reducing it to the finest powder, and treating it with boiling water; urate of soda will thus be obtained in solution. The liquid is filtered off from the insoluble albumen, and the clear fluid is mixed with strong acetic acid, and set aside to crystalize. The uric acid adheres to the sides and bottom of the glass. It may be collected, and will give the characteristic reactions with nitric acid and ammonia.

Kreatin, which I formerly mentioned as one of the constituents of the flesh, probably exists in the blood. It exists certainly in the urine, as I shall have to show you. Hippuric acid, also, which exists in the urine, especially in gramivorous animals, has been found in the blood. It was detected in the blood of an ox, by M. Verdeil. Lastly, Dr. Garrod also considers he has found oxalic acid in the blood of a patient in University College Hospital.

Thus, then, there exists in the blood not only the substances which pass into the body as food, but the substances which pass out in the excretions. I have said that the great peculiarity of the blood is, that it contains fibrin and the red globules; these substances cause the blood to differ from all other fluids. The spontaneous coagulation and the red colour are caused by the globules and the fibrin; neither of which exists ready formed in the food, nor are they ever found in the healthy excretions. If it were not for these substances, it might almost be said that the blood was nothing but a solution of food passing in, and of substances passing out of the body; it is, then, by the formation of the fibrin and blood globules, that the blood is made a peculiar substance,—an organised liquid, which may live and die like the more solid organs of which we are composed.—*Medical Times*, August 2, 1851.

MEDICINE.

ON THE TREATMENT OF SMALL-POX.

By Joseph Grosvenor Pasquin, Esq., Birmingham.

[After mature deliberation upon the treatment of small-pox, Mr. Pasquin arrived at the conclusion that the pitting and disfigurement of the face was dependent upon the confinement of the matter too long in the pocks, causing a slough thereby to form in the cellular tissue lying between the cuticle and the

facia of the face. This is not regenerated, hence the cuticle falls into the space where the cellular tissue is then wanting, and thus follows the pitting. To obviate this, Mr. Pasquin determined to puncture each pock previous to its arriving at perfection, and apply a common poultice. He adds :]

I have seen several cases, four wherein the larynx was not at all affected, on which I tried the experiment of puncturing every pock on the face, and afterwards applying repeated poultices. This treatment succeeded to my utmost satisfaction, the face being left as clear of marks as it was previous to the attack of small-pox. I had three more with affection of the larynx, the respiration being so difficult that I expected asphyxia would come on in a few hours. To these I applied leeches over the region of the larynx, and on the following morning, I found the respiration had become perfectly free and easy.

One of the three cases last reported is that of D—, labourer. This was the worst case of confluent small-pox I ever witnessed in the whole course of my medical career. He was, in the early stage of the disease, attacked with great difficulty in breathing; his tongue, soft palate, pharynx, and larynx, as far as I could see, being covered with pocks. I applied leeches at night, and on the following morning his breathing was perfectly free and easy. His face was so completely covered with pocks, that I could not find one space over his whole face sufficient to lay on a grain of sand, which was uncovered by any pock. In this case I punctured as many pocks as I could myself, and requested his mother and sister to puncture the remainder. He is now up and doing well, and has not a mark on his face.—*Lancet*, July 12, 1851, page 30.

ON THE USE OF COLCHICUM IN THE DELIRIUM AND COMA OF SCARLATINA.

By Professor Bennett, Edinburgh.

A boy, aged 14, entered the clinical ward on the third day after experiencing distinct rigors. There was restless delirium, and constant moving of the head from side to side upon the pillow. He was apparently conscious when spoken to, but could not answer questions—the tongue was protruded with difficulty, dry, and of bright red colour, studded with florid elevations—deglutition was much impeded—bowels open—pulse 130, weak—urine voided with difficulty, and diminished in quantity—sp. gr. 1025—not acted on by heat and nitric acid—skin hot and dry, covered with the bright red scarlatinal eruption.—*Ordered salines and slight diuretics.* He continued in the same condition, the angina, coma, and alternating delirium, however, being more pronounced until the sixth day. During this period, all the urine passed was carefully examined. The amount was diminished (17 oz. per day), but it was free from deposit, and unaffected by heat or nitric acid.

R. Sp. æther. nit. ʒ iij; pot. Acet. ʒ ij; Tr. colchici ʒ ss.; Aquæ ʒ iij.
Ft. mist. A teaspoonful to be taken every four hours.

On the following day all coma and delirium had disappeared. He answers questions when put to him—skin cool—eruption faded—pulse 96, weak—passed 30 oz. of urine, which is turbid, with small flakes of a membranous character floating in it. On the 8th day the quantity of urine excreted was 50

oz., and it was still more loaded with sediments. On examining the urine with a microscope, it was seen to contain—1st, membranous flakes, composed of aggregated rounded particles, apparently agglutinated together, and strongly resembling some forms of vegetable tissue—2d, rounded and irregular masses with spicula—3rd, amorphous molecular masses. The whole of these elements, on being analysed by Mr. Drummond, were found to consist of urate of ammonia. Next day the urine was only slightly turbid, and on the following one, was perfectly clear. From this time the boy gradually recovered.

Commentary.—This was a very severe case of scarlatina. The angina was intense, occasionally rendering deglutition impossible. There was delirium on the third day, alternating at night with coma, which was often profound. The worst result was apprehended. It recurred to me that the head symptoms in this as in several cases of typhus, might probably depend not so much upon inflammation of the brain, as is generally supposed, as upon absorption of, and poisoning by urea, an idea that appeared to me supported by the diminished quantity of the renal excretion, as well as its freedom from all deposit. Remembering the alleged virtues of colchicum in increasing the elimination of this excretion, I ordered it, in combination with diuretics, and the result was remarkable. For on the next day, not only had the fever diminished, but the urine was increased in amount and loaded with urates to an extent and in a form I had never previously seen. It may be argued that the fever had terminated by a natural crisis on the seventh day; but I cannot help thinking that in this case nature was assisted by the colchicum and diuretics. At all events, this medicine seems to me worthy of more extensive trial in scarlatina accompanied by diminution of urine and head symptoms.—*Monthly Journal of Med. Science.* August.

LATENT PNEUMONIA.

By Dr. Lyman, of Berlin.

To Laennec, so far as we are aware, we owe the knowledge of *latent pneumonia*. He understood by that term the pneumonia that is developed in dying persons, that which accompanies certain forms of epidemic catarrh, and the inflammation of the lungs, which is a symptom in some eruptive and continued fevers. This epithet was applied by Laennec, because under such circumstances, the rational signs are usually absent, and the disease is only discovered by close examination. If this form of pneumonia be admitted, the above definition is evidently too narrow, since, on the one hand, lobular pneumonia must be placed in the same category, and, on the other hand, many cases occur under different circumstances from those mentioned by Laennec, in which the existence of the disease would not have been ascertained but for exploration by the physical method. It would be better, if this name is still to be employed, that it should be limited to such cases as supply neither rational nor physical signs whereon to found a sure diagnosis. The following case is an example of Laennec's *latent pneumonia*, which was not detected until late:—

S—, an unmarried woman, sixty years of age, was the subject of very frequent pains in the stomach. If she ate anything not easy of digestion, pain was produced. Very frequently, however, it would occur without any apparent cause. She had consulted many physicians, some of whom had exaggerated the nature of the disease, while others had regarded her symptoms as imaginary. Early one morning (February 15th) Dr. Lyman was summoned to attend her,

for what she called called, "inflammation of the bowels." The patient was tossing about in bed, and pointed to the right hypochondrium as the seat of pain. Dr. Lyman did not concur in the diagnosis. The bowels had not acted for 24 hours, although four enemata had been given. The abdomen was soft, not distended, slightly tender on deep pressure in the right hypochondrium. The tongue was dry; there was slight nausea, without vomiting; thirst; the skin not hot; the pulse but little more frequent than usual, small and regular; the head free from ailment; the attack had not begun with rigors. A full clyster was administered, at the same time that a spoonful of castor oil was taken, and the bowels then acted. The pulse rose, the skin began to perspire. At the patient's desire a consultation was held. She continued to complain of the pain in the epigastrium, which was accompanied with nausea, and a painful sensation in the chest. The conclusion of every sentence she spoke was uttered in a kind of cry. The frequency of respiration was in about the usual relation to that of the pulse, of one to four. There was no cough. Her attendants observed that she would lie perfectly quiet an hour at a time, and that her speech at these times would be natural. The physician called in consultation considered the case to be one of *hysteria*, and accordingly prescribed an antispasmodic draught of Infusion of Valerian and Oil of Camomile. This caused suffusion of countenance, and increased the rapidity of the pulse to one hundred. The patient remained in the same state for many days, it being impossible to obtain any more definite indications of the seat of the disease. Any examination of the thoracic organs was obstinately refused. "I am suffocated," was the answer to the most precise questions with reference to the state of the respiratory organs. Six cupping-glasses were applied on the chest, and small doses of tartar emetic were administered. The condition of the patient remained as already described; the pulse soft and small; the skin moist; oppression at the epigastrium; no difficulty of breathing; no cough nor expectoration; general distress. Another physician was consulted, who also regarded the case as hysterical, and advised similar treatment. On the fifth day the patient complained of palpitations, sense of oppression in the region of the heart, nausea, pain in the right hypochondrium, with heat of skin. Four leeches on the præcordium gave some relief: A quarter of a grain of morphia, although repeated, did not induce sleep. On the following day the pulse was threadlike, the surface covered with a cold clammy sweat, and the patient seemed dying. She revived under the use of stimulants, but her cry was kill me, I am suffocating." It was clear that it was impossible to proceed further without a thorough examination of the chest.

On the right side, from the fourth rib downwards, there was absence of resonance on percussion, and bronchial breathing. Dr. Lyman prescribed *Liq. Ammon. Annisat.*, ten drops every two hours. The condition of the patient apparently improved; the pulse nearly natural; the breathing quiet; the expectoration was free, and of a greyish-green colour; and the tongue was moister; there was less thirst; and sleep was easier. Towards morning, on the eighth or ninth day of the attack, the patient had slight rigors. From this time the medicine occasioned cramps of the stomach, as did also small doses of *ipeca-cuanha*, for which they were exchanged. On the tenth day she put herself in a great passion, because, as she thought, her physicians did not visit her often enough. Her case did not seem immediately urgent, still less did it call for the attendance of three physicians. In the evening Dr. Lyman found her in a state of great excitement, with hot skin, flushed countenance, and acute fever. She

was unmanageable, tearing off the cold wet cloths applied to her head, and was extremely restless, expressing all the while a fear that she was going blind. Under these circumstances nothing could be done. After some persuasion, however, the patient became quiet, and fell asleep. On the following morning her pulse was eighty. The other symptoms were not improved. In the afternoon slight convulsions occurred; she became insensible, put her hand repeatedly to her head, and during the night was delirious at intervals.

On the morning of the 27th she was unconscious, passing her stools involuntarily; the right side of the body was paralysed; the arms were flexed on the forearm; sensation was lost; the countenance anxious, the brows knit, the pupils contracted and motionless, deglutition difficult, the tongue dry, the mouth open, breathing stertorous, pulse 120. She continued in this state five days, and died on the 4th of March.

Sectio cadaveris.—The dura mater was adherent to the bone; the membranes congested; puriform effusion in the arachnoid, especially at the base of the brain; the substance of the brain much loaded with blood; all the ventricles contained pus and serum.

The right lung was adherent to the pleura; the surface of the diaphragm was thickly covered with lymph. The lower and middle lobes of the right lung were in a state of grey hepatization; the upper lobe œdematous. The right lung and the heart were healthy.

In the abdomen nothing morbid was found; but an abnormal position of the viscera was observed, produced by tight lacing.

Dr. Lyman observes that this case should be placed in the category of Laennec's *latent pneumonia*. All the usual indications of an affection of the chest were wanting. The dissection showed an extent of disease little suspected. The morbid appearances referred the pain in the right side and epigastrium, to inflammation of the diaphragm; the same circumstance would also seem to account for a peculiar cry with which she finished every sentence after speaking for some time.—*Casper's Wochenschrift*.

CASE OF EPILEPSY TREATED BY TRACHEOTOMY.

By W. H. Cone, Esp., Uzbridge.

[In the case of a boatman, suffering under an extreme epileptic seizure, after which he was left in a state of deep apoplectic coma with asphyxia, inspiration being performed only by seldom and short catches, whilst the veins in the head and neck were every where visible, and greatly distended, Mr. Cone, after the patient had remained in this state nineteen hours, determined to perform the operation of tracheotomy; acting upon the suggestion of Dr. Marshall Hall, that as the epileptic or other convulsion implied closure of the larynx with expiratory efforts, the attack of convulsive epilepsy would be prevented by that operation.]

"Feeling convinced," Mr. Cone observes, "that the patient must shortly expire, and that the root of the evil was in the closure of the larynx, I at once proceeded to open the trachea, a matter of no small difficulty, on account of the twisted state of the neck, the engorged state of the vessels, and the constant action of the muscles. The operation of tracheotomy was performed, and the tracheal tube is kept in the trachea to the present time. The relief to the patient was immediate; the air passed into the lungs, the state of spasm sub-

sided, with the turgid condition of the head and neck, and the patient soon recovered his sensibility. This was not the only gratifying result: although the poor man had experienced his epileptic seizures in increasing violence during seven or eight years, and recently thrice a week, he had, on April 1st, during two months, had no return of them. More recent accounts of the patient, who is now in Staffordshire, confirm the former report, the tube is still kept in the trachea, and the epileptic seizures have not recurred."—*Lancet*, July 12, 1851, page 35.

SINGULAR CASE OF CHRONIC HYDROCEPHALUS.

On the 7th ult., James Scott, of Elgin, died, aged 41. He was 3 ft. 11 in. high. His limbs were of childlike proportions, but his head, which was twice the size of that of a full-grown man, was $11\frac{1}{2}$ inches long, $27\frac{1}{2}$ inches round the brow, 15 inches round the back, and from the nape of the neck to the nose, 20 inches. From under the nose to the extremity of the chin was $4\frac{3}{4}$ inches. Until one year old he had the appearance of other children, when at that age his head began to grow rapidly. He was never able to walk, and had to be tied in his chair. He could not help himself to food, and never indicated that he wanted any. His eye, which was very small and piercing, rolled incessantly. For a long period he had been subject to fits every night, and for 30 years was bedridden. He gave no indication of any understanding, and was sometimes speechless for two or three days. He seemed to have suffered great pain, for in the midst of his prayers he would break into paroxysms of rage, curse and swear without any object. When his mother's corpse lay in bed beside him, he took no notice of it. He had a luxuriant head of hair and strong beard. His parents had been well off in the town, but upon their death the deceased was taken care of by the parochial authorities till his death.

SYMPTOMS OF THE FIRST STAGE OF PHTHISIS.

[From a Concise Practical Guide to the Physical Diagnosis of Consumption.]

By Dr. R. Payne Cotton.

The following are laid down by Dr. Cotton as the signs of the first stage of phthisis.

Bulging of the infra-clavicular crigin, with increased or diminished resonance.

Retraction of the same region, with imperfect resonance.

Imperfect expansion. Elevation of the thoracic parietes must not be confounded with their expansion.

Increased vocal fremitus.

Increased distinctness of the heart's sounds under the clavicle.

Jerking or rough inspiration.

Prolonged or bronchial expiration.

Pulmonary crumpling sound, or a few dry crackling rhonchi. The signs of bronchitis limited to one or both apices.

In determining the importance of these signs, it must be borne in mind that expiration, as shown by Louis, is, in a certain proportion of healthy individuals, somewhat prolonged, and the vocal fremitus and resonance comparatively strong under the right clavicle.—*Med. Times*, April 19, 1851, page 431.

SURGERY.

ON THE TREATMENT OF ANEURISM BY COMPRESSION.

By Jolliff Tuffnell, Esq., Surgeon to the City of Dublin Hospital.

[Although Mr. Tuffnell, on the part of his Dublin professional brethren, does not wish to discard the ligatures, he still prefers pressure as the general rule in ordinary cases. He says:]

"I consider compression applicable to every ordinary circumscribed aneurism in an extremity, where there is sufficient room for the application of the compressing medium at two different points above the tumour, premising, of course, that pressure on the trunk of the vessel completely controls pulsation in the sac, thus proving that no high bifurcation exists.

I do not advise it in cases which are rapidly extending in size, or where they continue to do so after compression has been tried. These aneurisms have no distinct sac; and to afford any chance of saving the limb, the blood through the main channel must be cut off, and at once, by securing the vessel.

"I do not advise or sanction it in cases where the disease has been allowed to run on unchecked, where the limb has become cedematous and swollen, and the surface of the aneurism a dusky, yellowish red. In such a case, the vein is most probably engaged, and if it be a popliteal aneurism, the knee-joint inflamed. Here, I believe, amputation is the only resource.

"Understand me, then: compression I advocate only in cases where the sac is entire, and where sufficient room exists for applying the pressure on two points of the artery above. At the same time, cases have so frequently occurred where the application of a single instrument has been sufficient for a speedy cure (such, for instance, as one that I saw under the care of Dr. Hutten, where popliteal aneurism of a considerable size, was, in seven hours and a half, by means of a single instrument, constructed on Dr. Carte's plan, rendered completely solid), that, although, for prudence sake, and as a general principle, I advocate the employment of two points of pressure, yet I by no means hesitate to employ a single instrument, and give the patient every chance, prepared at the same time to use the ligature, if any necessity arise."

In preparatory and constitutional treatment, Mr. Tuffnell follows Dr. Bellingham. In selecting the instrument to be employed, he discards all but a conical weight from six to ten pounds, padded, laid upon the artery at the groin, and retained there by the patient's hand; with the elastic apparatus of Dr. Carte. In this apparatus, Indian rubber takes the place of, or rather relieves, the pressure of the unyielding screw; an important improvement, which, however, may be easily accomplished in various ways by those who do not possess Dr. Carte's instrument.

The author advocates such an amount of pressure as stops pulsation in the aneurism to the touch, in which case the ear will still detect the flow of blood into the sac. He urges us to employ the minimum amount of pressure with which complete command over the circulation can be obtained, with the view of obtaining a more rapid cure than when a wave of blood is permitted to pass through the sac; although in irritable persons less pressure may be attempted, as aneurism is cured by a mere diminution of the current of blood through the tumour. Cases are also quoted, proving that when it has been necessary to suspend compression, a curative action still goes on. The temporary interruption to the current of blood appears to line the inside of the sac with a fibrinous deposit, which increases in thickness and completes the cure.

It is an important question to determine how far the employment of compression interferes with the subsequent application of the ligature, should it be required from the intolerance of pressure or increase of the aneurism. Of course a careless practitioner might so injure the artery, that it would be dangerous to apply a ligature upon the part he had compressed; but Mr. Tufnell quotes from cases where an opportunity has been afforded of examining the limb after death, proving that no injury whatever was inflicted upon either artery or vein, at the spots where compression was applied. He quotes from other cases, in which compression was given up and the ligature employed, the previous use of compression in no way affecting the operation in its results.

That compression is an *effectual* cure for aneurism, is proved by the fact that during eight years, the ligature has only been used three times in Dublin, either in hospital or private practice, in two of these cases the aneurism being traumatic. During this period, compression has been employed in 39 cases. In 30 of them a perfect and complete cure was the result. In one, compression was discontinued, and the tumour did not increase in size. In two, the ligature was used successfully. In three, amputation was necessary, the patient surviving in each instance. Three patients died; one from erysipelas, and two from disease of the heart. It is quite clear from the details of the cases in which amputation became necessary, that the ligature would not have lessened the necessity for removal of the limb; but, on the other hand, would have almost certainly induced gangrene, and thus lessened the probability of saving the patient's life. The death from erysipelas occurred during a prevalence of this disease in the hospital, galvano-puncture having been employed, and the patient himself having unduly increased the amount of pressure.

The average duration of treatment in these cases, was twenty-five days. The average of the eight most favourable cases was only twenty-eight hours. In one case, seven hours and a half were only required for total solidification of the content of the sac. There can be no doubt that, from the admission of a patient to the time he leaves the hospital, after the employment of the ligature, a longer average stay than twenty-five days-takes place, and that a very speedy cure cannot be hoped for.

Statistical returns of the success of the ligature give the following results:—

“In Dr. Crisp's work are detailed the particulars of 188 cases, where the vessel was secured for popliteal or femoral aneurism. Of these—

| | |
|---|----|
| Died from the effects of the operation..... | 35 |
| Recovered after suffering subsequent amputation | 11 |
| Recovered after sloughing of the sac..... | 2 |
| Recovered after mortification of the toes..... | 1 |
| Recovered after sloughing of the integuments..... | 1 |

—50

So that more than the fourth of these cases either terminated fatally, or were maimed for the rest of life.

“Mr. Phillips's experience and researches are the next to be considered. They are thus quoted by Mr. Storks:—“Mr. Phillips collected 171 cases of aneurism affecting the lower arteries, which were submitted to the Hunterian operation. Of these cases, 57 (or exactly one in three) were unsuccessful, in which all the patients except two died, not of the disease, but of the operation. Amongst the successful cases, secondary hemorrhage took place fifteen times. Fifty-nine of these cases required ligature of the femoral artery, 35 of which

were unsuccessful; thus giving a mortality of two in three, in the artery most frequently subjected to the operation.'

Mr. Norris gives a fuller report, his table embracing 177 instances (155 of popliteal, and 22 of femoral aneurism) where the operation was performed. He gives the surgeon's name, the sex and age, situation of disease, its duration, period when each operation was performed, when the ligature came away; if fatal, the date and cause of death, with reference as to where the particulars of each case are recorded. There is, then, no getting behind this collection, no stating, in general terms, that statistics are wrong, and cannot be relied on. If truth is spoken in the first published details, it is re-echoed in Mr. Norris's table.

"He gives, I say, 177 cases, of which—

| | |
|---|----|
| Died from the effects of the operation | 38 |
| Recovered after subsequent amputation... .. | 6 |
| Recovered after supputation of the sac | 10 |
| Recovered after gangrene of the foot.. .. | 2 |

—56

So that nearly one out of every three cases operated upon, either terminated fatally, or were, to a certain extent, maimed for the remainder of their lives."

[These returns will doubtless assist in convincing the profession, that compression must become the general, ligature the exceptional, practice in the treatment of aneurism.]—*Brit. and For. Medico-Chirurg. Review.*

ACCIDENTAL AND COMPLETE EVULSION OF THE GLOBE OF THE EYE.

Dr. Verhaeghe mentions the following case in the *Annales d'Oculistique*:—A fisherman of Ostend, returning home in a state of complete inebriety, fell against the key of his door. The ring of this key had become sharp by long usage, and cut the upper lid clean through from the above downwards. Entering afterwards the orbit, it acted like a scoop, separated the eye from all the parts which attach it to its orbital situation, and regularly extirpated it, so that the organ went rolling on the floor. Strange to relate, the man was so intoxicated that he did not heed this frightful wound, and went to bed. His wife, on rising the next morning, was surprised to find that the husband had lost so much blood, and horrified at seeing the eye on the floor. The man was taken to the hospital, where the parts (a few shreds of conjunctiva and of the recti muscles) soon cicatrized and adhered completely.

TREPHINING FOR CARIES OF BONE.

M. Jules Roux, chief surgeon of the naval department at Toulon, has published, in *L'Union Médicale*, a few cases which would tend to show that among the various means usually employed to arrest caries of bone, trephining should not be neglected. He had employed the trephine at the base of the petrous bone, which had been carious for several years. When a circular piece of bone had been removed, a deep cavity was laid bare, in which the index finger came in contact with the meninges. The case did well, and good results were also obtained in a second, where trephining was used upon the canine fossa of the superior maxilla, after the soft parts had been dissected and thrown upwards. Trephining is pretty frequently used in this country for facilitating the removal of necrosed portions of bone, but seldom for mere caries.

MIDWIFERY.

SUCCESSFUL CASE OF INDUCTION OF PREMATURE LABOUR.

Dr. Chailly has published, in the *Revue Médico-Chirurgicale*, the following instance of induction of premature labour:—Mrs. W—— presents the peculiarity of a pelvis measuring at the brim only three inches of antero-posterior diameter. In 1847, the head of the child arrived at full term, became locked at the brim, and was removed dead with the long forceps. In 1849, the same difficult labour was repeated, but the child was extracted alive by the same means. On a third gestation in 1851, Messrs. Malgaigne, Baron and Desormeaux, called in consultation, decided that the present was a case proper for the induction of premature labour.

On the completion of the eighth month prepared sponge was placed into the os uteri at nine in the morning. Mrs. W—— spent the day in preparing for her confinement, took her accustomed meals, had a warm bath, and experienced not the slightest uneasiness. At five in the evening, the sponge was withdrawn, the cervix, though thick, was sufficiently dilated, and the membranes were ruptured without difficulty. A small quantity of amniotic fluid escaped, and no pain was complained of. Mrs. W—— slept well, and had a slight discharge of waters during the night. She took her breakfast comfortably the next morning, and at half-past nine it was found, by making an examination, that the cervix was exactly in the same state as on the previous day, and no presenting part could be felt at the brim. She now took fifteen grains of ergot in three doses; twitchings were felt towards eleven; at half-past three very bearable grinding-pains came on, and succeeded each other with perfect regularity, so as to allow the patient to read and maintain the erect posture. At half-past five, Mrs. W—— was spontaneously delivered of a lively little girl, who had presented with the breech. Mother and child have done extremely well, the latter having offered all the usual features of perfect viability.

VICARIOUS MENSTRUATION OF A NOVEL KIND.

Dr. Lecointe, of Eu, in France, has published, in *L'Union Médicale*, a case of an extraordinary description, of which we shall offer a brief outline. The subject is a servant girl, twenty-nine years of age, of apparently good health; she had never menstruated, and for the last seven years had experienced flushings and heat in the face, these symptoms recurring every four or five weeks. At these periods she likewise complained of severe lancinating pain in the right thigh, and sometimes leg and foot, the whole limb then becoming extremely tender to the touch.

Towards June, 1842, these phenomena increased in intensity, the patient became very weak, the abdomen felt tense, tympanitic, and she could no longer pass urine. Dr. Lecointe prescribed leeches to the hypogastrium, and prolonged hip-baths. The urine flowed a little; but at last the girl was persuaded to submit to the catheter, and a large quantity of dull and foetid urine was drawn off.

Now began a series of strange phenomena; the bladder, uterus, stomach and rectum began to throw off what the patient called *balls*, these were pieces of membrane, or rather membranous casts, white, dense, and covered on one

side with gelatinous matter. The vesical casts were somewhat large, as she was obliged to extract them with her fingers. On a former examination, the internal organs of generation could hardly be properly explored, as the hymen was unbroken, and rather tense, but the casts now came per vaginam, and the patient being obliged to dilate the parts herself, in order to give passage to the membranous formations, it was found on examination that the os was pervious, and the cervix of the normal size, though tilted backwards. Here the casts assumed a tubular shape.

The stomach became now very irritable, and a great abundance of glairy matter, mixed with pseudo-membranes, thrown up. The vomiting was now and then of a purely sanguineous character, and in the coagula ejected an ascaris lumbricoides was noticed. The patient stated that she had likewise seen such parasites in the matters which had been expelled from the vagina. Diarrhœa supervened a little time afterwards, and in the dejections the same pseudo-membranous products were observed.

After a few weeks' respite, the symptoms recurred with renewed intensity; all the above-named organs secreted the same membranous products, but the uterus was evidently the most active. In one day Dr. Lecointe extracted ten casts from the vagina; they were rolled up, and exhibited now for the first time a red colour. One of these presented on one side an infundibular shape, which made the medical attendant suspect that the membrane must have been formed in close vicinity to the Fallopian tube.

The ejection of the casts was always accompanied by much pain, the latter being sometimes so intense as to cause the patient, who was far from being pusillanimous, to roll about in the bed with agony. The sanguineous flux was now suddenly transferred to the ears; these organs discharged each about a tumblerful of blood; vomiting of the same fluid came on a few days afterwards, and the casts were again ejected from the stomach, intestines, bladder, and uterus. When these symptoms had ceased, a great improvement was noticed; the patient gradually became stronger, and from 1842 to the present time, the girl has experienced no uneasiness but dysuria every two or three months, except in July, 1843, when the most complete relapse occurred. The author does not say whether any amount of regular menstruation has appeared since the casts are no longer secreted. This is a great omission. The pseudo-membranous products were examined by M. Mialhe, and were found to be composed principally of albumen.

SEPARATION OF THE CERVIX UTERI DURING LABOUR.

By Dr. Johnston.

In this case, a first labour, the anterior lip of the os uteri was much prolonged and carried before the head. The pulse being frequent and hard, bleeding was resorted to, and belladonna was applied to the cervix uteri. About thirty-five hours after the commencement of labour, the head was suddenly delivered, under the influence of energetic pain; and carried before it a portion of the cervix uteri, separated in its entire circumference, and measuring at various parts from 1 to 1½ inches. Convalescence took place speedily; and the author learned that twelve months after this, the woman had been delivered of a second child in ten minutes, her labour coming on without any premonition.—*Am. Journ. Med. Sc.*

PATHOLOGY.

ON THE MORBID ANATOMY OF CHRONIC ULCERATION OF THE RECTUM.

By T. B. Curling, Esq., F. R. S.

My inquiries into the morbid anatomy of the rectum have led me to remark the frequency of ulceration of its mucous lining, not only in cases of dysentery, and as a consequence of the ordinary disease of the part, such as stricture and cancer, but as a separate affection. In several specimens which I have examined, ulceration was diffused over a considerable extent of surface. I have observed the whole of the lower part of the rectum stripped of its mucous membrane for a distance of two or three inches. This extensive disease is sometimes, indeed generally, attended with thickening and consolidation of the subjacent tissues, without diminution in the calibre of the bowel. The muscular coat is in some instances hypertrophied. In one case, the mucous coat for a short distance within the sphincter was so riddled with holes as to form, as it is described in the post-mortem book, "a perfect cribriform tissue," the submucous tissues being at the same time much thickened. I have seen the mucous membrane ulcerated in patches, the sound portions being in some places detached from the muscular fibres beneath, so as to form bridges more or less broad, or merely some narrow bands or bridles. There were frequently abscesses and fistulous passages in the thickened tissues around the diseased rectum. In two instances ulceration had produced a perforated opening communicating with the peritoneum, death having been caused by the escape of some feculent matter into the abdomen and inflammation of the serous membrane. In other cases the peritoneum was involved in the consolidation, and inflamed without being perforated, the omentum in one case being adherent to the anterior part of the rectum.—*Brit. and For. Med. Chirurgical Review*, October, 1851.

THERAPEUTICS.

ON THE DECOMPOSITION OF PHOSPHATIC CALCULI BY SOLUTIONS OF LEAD.

By Dr S. Elliott Hoskins, F. R. S., &c.

[From cases which have occurred under his notice, Dr. Hoskins says, that not only does the bladder, under irritation, tolerate the presence of solutions of lead, but also that they act as sedatives, and exert a favourable influence, directly and indirectly, on the morbid secretion of mucus which generally, in such cases, exits. Dr. Hoskins proceeds:]

After having made trial of most of the vegetables supersalts of lead, all of which act, more or less, as unirritating decomponents, I have returned to the use of that originally proposed, the nitro-saccharate, as by far the most effective. That prepared for me by Mr. Garden, of Oxford Street, is much more energetic as a chemical agent than my own, and equally mild in its physiological effects. It is likewise more decidedly an organic salt, which I consider essential to the fulfilment of the ends in view; and I am strengthened in the opinion that sugar is a necessary ingredient, from the perusal of two papers in the July number of the *Pharmaceutical Journal*; one by M. E. Peligot, on the "Combinations of Sugar with Lime," and another by M. Barreswill, on the "Solution of Carbonate of Lime in the Saccharates."

One grain of the salt, superacidulated with five drops of strong acetic acid, is the proper proportion for admixture with each fluid ounce of water. It is essential that the salt and the acid should be incorporated before the addition of the water, and that the whole should be brought to the boiling point. Superacidulation is necessary on many accounts; it secures perfect solution, increases the decomposing activity of the liquid, and prevents the formation of any carbonate of lead.

As the salts contained in the urine tend to decompose the solution, and lessen its effects on the concretion, the bladder should be evacuated, and washed out with tepid water before the lead fluid is introduced. A double-current caoutchouc catheter is the best for this purpose, as it enables a continuous stream to be employed; and as, on account of its flexibility, it is less liable to irritate the urethra, which should be sedulously avoided. From four to eight fluid ounces of the solution may be thrown into the bladder at a time, and renewed every ten or fifteen minutes, as often as may be deemed proper. By renewing the liquid at short intervals, much greater effect on the calculus is ensured, than when it is allowed to remain longer; for the precipitate formed by decomposition soon envelopes the stone, and puts a stop to further action, until a fresh surface is exposed. Exercise during the retention of the injection increases its effect. Some slight revulsion may be produced by the first introduction of this, or any other fluid, into the bladder; when such is the case, the operation should be remitted for a day or two, and cautiously renewed. The injection may be either warm or cold, as may be most agreeable to the sensations of the patient. Warmth favours the decomposition of the calculus.

If used with proper precautions, I have found that the lead solutions exert a sedative and salutary influence on the lining membrane of the bladder, as they do on external surfaces under inflammation. They also act upon the mucus, which is so abundantly formed in cases of this nature, coagulating it into short curdy flakes, which are easily passed through the urethra.

When the urethra itself is inflamed, or abraded, the injection will be injurious; for the lining membrane of the canal is, I believe, more sensitive than that of the bladder. The introduction therefore of decomponents should be had recourse to, either before lithotomy, or after the urethra has recovered from the effects of the instrument employed, but can never be used, with any prospect of success, where organic disease of the bladder or prostate exists. The injection should not be employed during the internal exhibition of hydrochloric acid, although it may be freely used when nitric acid is administered. When the bladder is not very irritable, a dilute nitric acid injection, alternating with the lead solution, will hasten decomposition.

The two facts established with respect to the lead salts, viz., first, their toleration by the bladder; and, secondly, their chemical action on calculous concretions, induce me to hope that they may become useful agents in the treatment of various other affections in the urinary organs. I have never presumed to imagine they would prove specific solvents for the stone; but, I trust that, where surgical operation is inadmissible, they will be of some avail for relief, if not for cure, by smoothing asperities, and removing the outward phosphatic coating of calculi, so as to bring them within the verge of the crushing forceps; in short, that they may avail for partial, if not entire disintegration. The latter is more likely to happen where layers, composed of the urates or oxalates, are bound together by phosphatic cement. On this species of calculus, they are calculated to act as highly carbonated waters do on those of another description.

"Nor is the action of highly carbonated waters," says Dr. Prout, "confined to their mere solvent effects; they undoubtedly possess disintegrating power; that is, the power of disturbing the attraction, both cohesive and adhesive, by which the molecules of the calculi are held together, so as to render them brittle and easily broken into fragments." This is an additional reason for using decomponents before recourse is had to lithotripsy.

Besides the kind of cases already adduced, there is one variety for which decomponents seem to be peculiarly adapted: viz., concretions in the prostate gland. No instrument hitherto devised has been successful in dislodging them. The first case, however, mentioned in the present paper, goes to prove that a considerable quantity of calcareous matter was removed from the prostatic portion of the urethra, by the use of the lead injection.

In the first experiment communicated to the Royal Society, it was stated, that one hundred grains of calculus immersed in lead solution for forty minutes, had lost twelve grains. In the second experiment, the quantity dissolved, from a fragment weighing thirty-seven grains, was, after half an hour's immersion, eight grains. Subsequent experience has verified the observations, and proves that, under favourable circumstances, decomposition takes place in definite proportions; so that, from the precipitate of phosphate of lead, the quantity of ammonio-magnesian phosphate which has been decomposed may be securely estimated.

Since these circumstances obtain out of the bladder, by means of a fluid which can be borne by that organ with impunity, we may reasonably hope, that the mere transference of the scene of action, from the exterior to the interior, will not materially affect the results.—*London Journal of Medicine*, October, 1851.

OIL OF PITCH IN THE ECZEMA.

The French medical periodicals have of late spoken very highly of the efficacy of the oil of pitch (*huile de Cade*) in the treatment of eczema. Indeed, M. Devergie, physician to the "Hôpital St. Louis;" where diseases of the skin are especially treated, advocated the oil several years ago, and has lately taken an opportunity of stating that this "*huile du Cade*" should be preferred to the empyreumatic oil obtained in the production of coal gas, which has been highly eulogized by M. Lafond Gouzi. Dr. Neligan, in his work on *Materia Medica*, states that the "*huile du Cade*" has been used on the continent in obstinate cases of herpes, lichen, and eczema, but observes that the term "*huile du Cade*" (*oleum cadinum*) has been restricted by some French pharmacologists to a tarry oil obtained by the dry distillation of the wood of the *Juniperus oxycedrus*.

THE ITCH CURED IN TWO HOURS.

Dr. Bazin, physician of the Hôpital Saint Louis of Paris, introduced not long ago a notable improvement in the treatment of the itch, since he succeeded in curing the disease in *two days* by general frictions with the sulphur ointment. Dr. Hardy, who has succeeded Dr. Bazin in the Scabies wards of the same hospital, has, however, considerably curtailed this already short time; he cures his patients in *two hours*. The method is described as follows:—Patients are no

longer admitted into the house for the treatment of the itch, as two hours suffice to render contagion impossible and the recovery almost certain. The patient is put into a warm bath, and rubbed for an hour with yellow soap; he then passes into a clean bath, where he continues to cleanse his skin for another hour. After leaving this bath he is taken to a particular room fitted for the purpose, and, with the aid of one of his fellow-sufferers, he is rubbed all over for half an hour with the following ointment:—Axunge eight parts, flowers of sulphur two parts, carbonate of potash one part. After this friction, the patient is examined and sent away cured, though sometimes pretty numerous vesicles on the hands and elsewhere remain unaltered. Dr. Hardy states that out of one hundred cases he has hardly had two or three relapses. The number of itch patients has considerably diminished, as none are now turned away for want of room; and the disease has thus spread with much less rapidity.

PHYSICAL SCIENCE.

IODINE RENDERED SOLUBLE BY SYRUP OF ORANGE-PEEL AND TANNIN.

M. Debauque mentions, in the *Journal de Pharmacie* of Antwerp, that he has found means of keeping iodine in a state of solution, when added to mixtures in the form of tincture. The author uses, for that purpose, syrup of orange-peel, which answers the purpose perfectly. It was suspected that tannin was mainly instrumental in this result; and this was rendered evident by putting a few grains of tannin into a quantity of water to which tincture of iodine had been added, and in which the iodine had of course been precipitated. The addition of the tannin caused the iodine to be immediately re-dissolved. Thus will the syrup of orange-peel be advantageously added to mixtures containing tincture of iodine, and tannin, to injections composed of water and the same tincture.

A SIMPLE PROCESS FOR PRECIPITATING THE COTTON CONTAINED IN COLLODION.

By Thomas Cattell, M.D., M.R.C.S. Eng.

A short time since, I ascertained that on mixing bisulphuret of carbon with collodion, an immediate precipitation or separation of the cotton takes place, leaving a limpid fluid consisting only of the solvent and precipitant.

The cotton presents the same fibrous appearance as though it had not been in a previous state of solution, and as gun-cotton would do if simply immersed in water. When dried (as much moisture as possible being first pressed out between folds of linen or bibulous paper) it cannot be distinguished from the dried pulp of the paper-maker.

This singular reaction of the bisulphuret on the collodion, would lead to the supposition that the gun-cotton performs the part of a base to the oxyde of ethyl (ether), for this substance is at once deprived of the peculiar properties which it possessed previous to solution.

It may serve also to explain more clearly the chemical composition of lignine, as acted on by nitric or nitric-sulphuric acid.

ON THE INFLUENCE OF VARIATION OF ELECTRIC TENSION
AS A CAUSE OF DISEASE.

By W. Craig, Esq., Ayr.

[Mr. Craig thus recapitulates the heads of the arguments he has advanced in a very interesting paper upon this subject.]

1st. That heat and electricity are identical, as the one can be converted into the other.

2nd. That a large volume of electricity surrounds every primary constituent of matter, especially that form of matter which constitutes the gaseous bodies.

3rd. That animal heat is supported by the electricity liberated from the primary constituents of matter during the processes of respiration, digestion, and assimilation.

4th. That electricity is evolved during these processes on the same principle as that which is evolved during the action of a galvanic arrangement.

5th. That electricity and nervous power are analogous, if not identical; as the action of the one can be successfully substituted for the other.*

6th. That the majority of diseases are caused either by the sudden abstraction or slow abduction of electricity from the body.

7th. That a low state of electric tension on the surface of the earth, produced either by the operation of evaporation or some occult movement in the great internal currents of the earth, is the remote cause of epidemic and pestilential diseases.

8th. That occasional and ordinary diseases are produced by the sudden abstraction or slow abduction of the electricity from the body, or its undue elimination during the vital processes.

9th. That since electricity is so essential to the integrity of the vital operations, it is indispensable that measures be taken to promote its evolution and prevent over-radiation.

10th. That electricity is the source of vitality in vegetable life.

11th. That electricity is attracted by the fibres of the roots of the plants; and by the instrumentality of the electric fluid does the plant extract its constituents from the soil.

12th. That vegetables of rapid growth require a large supply of electricity to secure their perfection and completion; and the potatoe is a plant of this kind.

13th. That the disease in the potatoe was produced by want of nutrition.

14th. That the want of nutrition arose from defective electric agency.

15th. That the cause of the deficiency of this agency was those abstracting influences which produced low tension of electricity.—*Med. Gazette*, Oct. 10.

* This conclusion is, in our judgment, not justified by facts. Nervous power cannot be transmitted by anything but *nerve*. Electricity may be transmitted by a variety of conductors, organic or inorganic, and of these, nerve is one of the worst. Animals which evolve electricity are provided with distinct organs for this purpose. By nervous power, milk, urine, and bile are secreted from blood. Electricity, in any form, cannot produce these or similar results. They resemble each other in traversing their respective conductors with equal rapidity; but this is not sufficient to establish their identity.—*Ed. Gaz.*