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UPPER CANADA JOURNAL

OF

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OCTOBER, 1851.

ORIGINAL COMMUNICATIONS.

ART. XXXIV.—*Cases of Angioloecitis or Barbados Leg, with remarks on the probable Pathology of that Disease.* By JAMES BOVELL, M.D.—Continued from No. 6, page 239.

THAT Dr. Graves should have adverted to the passage in Dr. Hillary's work above alluded to by Mr. J. Cooper, affords strong illustrative proof that both himself and Mr. Cooper have drawn their conclusions from erroneous data, namely from a consideration of the morbid anatomy of chronic cases only, and are in perfect ignorance of the nature of those phenomena which are antecedent to that last stage which gives to the disease its fixedness. Instead of that passage in Hillary's work being adduced as an argument against himself, it strongly corroborates the correctness of his opinions and the soundness of his practical observations.

It is quite true that inflammation of other parts than the lymphatics may cause a permanent enlargement by the separation and deposit of the fibrous element of the blood; but if, as a general rule, we find the lymphatics in elephantiasis to be the structures ordinarily affected, we have strong grounds for believing the disease to be essentially seated in that system. Mr. Paxton, of Rugby observes:—“That a fourth series of disintegrations of the blood is apparent in the separation and deposit of its fibrin.—There is a frightful epidemic, (endemic?) well known in the West India Islands, in which the fibrin becomes excirculatory and eventually undergoes a slow condensation, and as in all fibrinous deposits it is then rendered insoluble. Such is elephantiasis: th-

parts most frequently affected are the lower extremities, but immense collections may be situated in the loose cellular tissue of the scrotum or accumulated in the subcutaneous tissue of other parts. There is a class of tumors also with which we are more familiar, not only occupying the exterior of the body but invading the interior likewise; the morbid anatomy of which shows them to consist principally of condensed fibrin. The several stages of production are extravasation of serum, the aqueous portion of which evaporates by perspiration, and exhalation by the lungs or kidneys leaving the insoluble fibrin under various forms. It has been demonstrated as intersecting scirrhus formations, and in such monstrous scrotal and preputial enlargements, cases such as Hoo-loo's, which are largely made up of fibrin thrown out of the circulatory mass. The accretions distinguished as scirrhus affecting the pylorus, the rectum, and the mamma are of the same character—all these diseases are mainly composed of fibrinous exudations in combination with, or existing as a web containing other substances as fat globules, cancer cells, and albuminous fluid."

Thus it appears that the fibrin becomes ex-circulatory under various circumstances, but whether as Mr. Paxton supposes the causes be originally in the fluids and not in the solids is another question. But in elephantiasis other structural changes ultimately take place, and the changes constantly found in one system of parts only, so that both in those who fall victims to the disease in the acute as well as in the chronic stage, the same vessels are found implicated; it is a mistake therefore to suppose "fibrinous exudation" to be the sole ultimate effect of angeioleucitis, for abundant evidence exists to show that both the superficial and deeper seated lymphatics are seriously involved, and that the skin ultimately becomes extensively implicated, thus even chronic cases furnishing diagnostic differences between elephantiasis and other enlargements as phlegmasia dolens, &c., &c.

The case adduced by Professor Graves in support of his views is that of a young man who was twenty-five years old, when admitted into Meath Hospital. "The swelling had commenced many years before his admission, and had attained its enormous size *gradually and without the least pain or inflammation of the skin, the subjacent adipose tissue or inguinal glands*. I appeal to those who have been in the habit of watching the progress of Barbados-leg, to say whether I am not correct in stating that, in no case does the limb *gradually* and silently enlarge itself, but that on the contrary its enlargement is contingent on the repeated recurrence of symptoms attended by well-marked characteristic local changes, and that either from the station of life in which the patient may happen to be placed in rendering repose attainable or not, or from predisposing constitutional causes, depends the permanency of those changes which render the limb so unsightly; and in the horse

precisely similar conditions are noticed, if the animal has only one attack the limb may remain for years exactly of the size left by that attack, but should he be liable to repeated recurrence of the disease then is the limb correspondingly enlarged—and on each occasion the hard knotted lymphatics may be traced running up the inner side of the thigh to the glands between the sheath and the thigh. I have never seen the horse affected in any other part of the body than the hind legs. I had a gentleman under my care who had repeated attacks of angeioleucitis in the lower extremities, and thrice in the abdomen. After one of these he was forced to go out on business on the sixth day after the inflammatory stage was supposed to have passed, and when the swelling had almost subsided; on his return home he found the whole leg enlarged to the instep, the pressure of the shoe preventing the foot from being engaged—to this day the limb is larger than the other, but benefiting from experience he has since been careful and the leg is not increasing in size. Hence it is that when the disease attacks the upper extremity—a rare circumstance—it being less under the influence of gravity does not offer the same opportunity for infiltration and solidification of the fibrinous material, and for this reason, next to the lower limbs the scrotum in the males and the breasts of females is more prone to fixed deformity. In the extreme and more chronic cases of the disease, the integument undergoes a change, becoming hypertrophied, and presenting in relief the natural structures of the skin and in those portions of the limb on which the papillary eminences have not yet been developed—ichthyosis is invariably present.—That this disease which on the authority of a distinguished French Pathologist, we have designated angeioleucitis depends on a change in the glandular apparatus would appear to derive support from a very important examination recorded by Mr. Rayer, in vol. 2nd of the English Translation of his valuable work of Diseases of the Skin. M. Reynaud and he examined the arm of a woman who had the right breast removed on account of a cancerous affection of the mammary gland. Subsequent to the operation, the lymphatic glands of the axilla had enlarged and become scirrhus, the right arm then became *oedematous* and the skin of the forearm was grayish and tuberculated on the surface, *it bore a considerable resemblance to the skin of the leg of the elephant*. There was a large ulcer on the back of the hand, at the bottom of which the extensor tendons could be seen; the discharge from this sore had been copious and fetid. Towards the upper and inner part of the arm there was a kind of excrescence which projected nearly half an inch. The surface of this growth was smooth and reddish; a part into which an incision had been made was of a dull white, it was traversed by a number of small vessels, its general characters were in all respects those of enceph-

loid formations, especially of that variety which is often found in the stomach. A careful dissection of the skin of the forearm exposed the following particulars:—A great number of lobules or *nipple-like prominences* arose from its surface the smallest might be regarded as simple papillæ very slightly developed, others were of the size of a large pea, or even of the extremity of the little finger. Those of considerable magnitude were uneven on the surface—secondary mammillary eminences rose from and gave them something of a mulberry appearance. In the spaces between them there existed a number of orifices apparently belonging to the cutaneous follicles—an epidermic formation of a dirty grey colour and of very considerable thickness covered them; the outer layer of this rather resembled a kind of scurf deposited irregularly, than a proper membrane, and were rubbed off with the greatest ease; when this was removed the adhering surface exhibited a multitude of elevations, which appeared to bury themselves by their bases within the spaces between the mamillæ and in the follicular orifices, and represented in exaggerated *ontaglio* and relief the different particulars of the external surface of the skin. Under this layer there existed another of a dull white, covering the papillæ and nipple-like eminences in a more uniform manner and adhering to them more intimately; after maceration for a few days however, this inner layer could be detached with the same facility as the outer one, when it appeared under the guise of a second epidermic lamina, its outer being of a dull white, its inner aspect on the contrary appearing slightly sprinkled with black, apparently contained in a thin mucous looking layer entangling a little dark colouring matter. In some places this remained deposited on the papillæ and nipple-like projections under the form of a layer which was readily removed by scraping. The numerous elevations which beset the surface of the skin immediately underneath it, now appeared so much the more conspicuous, as the thickened cuticular layers were removed, these having penetrated the spaces between them and thus tended to conceal the extent of their relief. The papillæ then appeared under a variety of aspects according to their size; the smallest consisting of slight simple projections somewhat flattened, and presenting a faint tinge of black upon their summit, similar to papillæ in general, when slightly enlarged but forming, especially when seen under water, a kind of nap or pile, extremely similar to that which is seen on the mucous membrane at commencement of the small intestines, when it is examined under the same circumstances. There were others which did not differ from these save in being less prominent; others again of a larger size radiated from a kind of neutral foot-stalk; to conclude, there were nipple-like projections of small size, and patches of flattened lamina standing side by side like the leaves of a book, and by their general reunion composing mamillæ of various magnitudes. The epidermic

laminae of which I have made mention first, did not penetrate between the layers of these composite mamillæ; they merely covered them generally. Divested of their common covering and floating in water as I said before, these elevations bore a strong, though of course an exaggerated resemblance to the foliaceous, and ramified villi of the small intestines when examined with a magnifier under water. The skin at length perpendicularly presented some differences of appearance before and after maceration.— Before maceration the corion considerably increased in thickness, formed a deep layer, to specify the exact limits of which was easy; its surface was plain in some places as the direction of the line which showed its termination indicated. In others it was serous, and the corion appeared to enter as a constituent part into the composition of the papillæ and mamillary eminences. Under the corion there was a layer of considerable thickness which in some points was not very distinct, but which in others was easily distinguished by its light bluish cast of colour. This layer entered as an element into the organization of the elevation of the skin and never formed its basis; it was infiltrated with a very considerable quantity of serum, and in the points corresponding to the elevations, and particularly to the larger of these, it was traversed perpendicularly by ramifications of the arteries and veins which expanded on the surface of the papillæ and mamillary eminence. Some of these eminences were of a livid red, not only on their surface but to a certain depth also. This appearance was destroyed by maceration; when the serous infiltration had flowed out, the corion was seen penetrating into the whole of the elevation.”

(To be continued.)

ART. XXXV.—*Fatal Case of Gangrenous Erysipelas.* By JOHN CRONYN, Fort Erie, Canada West.

MARGARET R., æt. 20, house-keeper, of middle stature, very fleshy, bilious temperament and of melancholy mind, for the last six months has complained more or less of head ache, loss of appetite, constipated bowels, furred tongue in the morning with offensive breath, occasional pain in right shoulder and side, and an irregularity in the occurrence of the menses.

For a fortnight past has complained more than before of head-ache &c., and of short hacking cough; during this period a small pimple appeared on the upper lip, a little to the right of mesial line, but attracted no notice until Friday, June 27th, 1851, when after a distinct rigor followed by fever, it became red, painful, and the lip swollen. On Sunday 29th, the lip became more swollen, the pimple became black, headache more troublesome, pain in right shoulder more acute, cough more frequent and pain in chest.—

This state of things alarmed the patient and her friends, who had been doing every thing and any thing to relieve her suffering but to no purpose. On Monday morning, 30th, I was sent for and found her in the following state:—

Headache intense, upper lip frightfully swollen and painful, of a very dark red colour, and a prominent black spot on its centre, short dry cough, pain in chest and right shoulder, tongue covered with white fur, wrist pulse 120, small and wiry, bowels confined, skin hot and dry, urine scanty and high coloured.

Apply warm fomentation to lip.

R Pulv. Jalap. gra. x.

“ Scammon. gr. iv.

Hyd. chlorid: gr. v. M.

R Pulv. Ipecac. comp. gra. iv.

Hyd. chlorid. gra. ij. M. f. pulv. quarta quaque
hora sum. etiam liquor ammon. acet.

3ij. dil. q. q. h. sum. Slop diet.

June 30th, 1851, Vespe:—Lip less painful, right side of face swollen and of livid red colour, mucous membrane of mouth on right side raised in large vesicles, lower lip partaking of swelling and dark appearance of upper; upper and lower extremities covered here and there with a rosecoloured rash, headache violent, very restless, tongue cleaner, pulse 112, full and soft; warm fomentation no longer agreeable. Lotio plumbi to the affected parts, continued other medicine, and ordered a simple injection, the bowels not being opened.

July 1. Headache more violent, eyes injected, slight delirium during night, bowels open once fœces dark and offensive, swelling more diffuse extending on the right side, from the horizontal ramus of inferior maxilla (inferior margin) backwards to meatus of ear and upwards to external canthus of eye. The lids of this latter organ very much swollen but not discoloured; left cheek slightly swollen but not discoloured; lip less swollen, and right half of it perfectly black and dry; mucous membrane of right cheek sloughy, but the cheek and lip are as hard as a piece of stick; pain of cheek more acute; respiration hurried; tongue covered with creamy mucous; gums slightly affected by calomel; pulse 140, small and soft, cont. med. Apply sinapism to cheek, cold to head, and an evaporating lotion of spt. of wine to cheek, &c.

Vespe: Occasional delirium; easily roused and answers questions rationally; has less pain of face, and the swelling of lids of right eye is reduced and of left cheek; headache more intense, eyes more injected, evident symptoms of metastasis to the brain; pulse 144, very thready; respiration 52; tongue black at base but moist; gums more affected; pain in chest allayed, yet the respi-

ration is very much laboured; the whole body covered with the rash already mentioned. Omit mercurial—℞ Pulv. jalap. gra. x—pulv. scam. g. v. M. ft. pulv. statim sumendus; mouth to be frequently washed out with sol. alumin:—Cont. evaporating lotion, cold to head and sinapisms to chest.

2nd—much worse, bowels open thrice during night; fœces of tarry darkness and consistence and very offensive; tongue black but moist; pulse small soft and very rapid, about 160. For a short time after bowels being opened the patient felt better, but is now evidently sinking fast.—Omit medicines, beef tea, wine, &c., to be given freely; cut off hair from head, and apply ice continue evaporating lotion to face, which is much less swollen; in interior of cheek sloughing persists. In a consultation, incisions to facilitate the removal of the sloughs were overruled, and nitrate of silver applied all over cheek and lips interiorly instead.

Vespere: 8, P. M.—Sinking very fast, constant low muttering delirium; picking at bedclothes; subsultus tendinum; body covered with cold clammy perspiration; pulse scarcely perceptible at wrist; pupils dilated to their fullest extent; mouth can with difficulty be opened; deglutition but slightly affected; tongue black though moist; swelling generally less and the scarlet rash upon skin is purple. Understands what is said to her, but cannot make herself understood; counter irritation to extremities &c., and stimulants of brandy &c., had but little effect, and she rapidly sunk expiring convulsed at ten o'clock, A. M. No post mortem examination was allowed.

Remarks.—The above case may not be found uninteresting to your readers, although coming from a junior member of the profession, who can say little for it, save that it is faithfully reported.—If it will form but one of the many cases that are cited, as a warning to parents and friends, not to tamper with illness, occurring as in the above case, I will be satisfied.

That the previous condition of the patient had much to do with the production and development of the symptoms so rapidly fatal, there is very little doubt, but the morbid power which gave rise to the violent local manifestations, must be very great, for it did not alone develope itself upon the lip, but appeared to take advantage of an abraded surface occurring where it might, e. g. a slight scratch upon middle finger of left hand, became inflamed and covered with a black scab simultaneously with the lip. Three cases are related in the *Lancet* for Sept., (Am. reprint,) under the care of Messrs. Stanley and Lloyd, and one by Dr. Covernton in the July number of U. C. Journal, all of which bear a very great analogy to the case above. The treatment differed in the commencement somewhat in the different cases, the result was the same in all, save one of Mr. Stanley's i. e., they died; this difference did exist however in the above;—matter never formed either

in the lip or cheek, the mucous membrane of both sloughed, little or no fœtor attending it, incisions therefore would have been useful only in facilitating the sloughing process; the pain and swelling in the lip and cheek was subdued by evaporating lotion, though retaining their hardness; under such circumstances, to what purpose would incisions be made? The excretion from bowels was bad, owing to previous biliary derangement, or depended upon the condition of the brain at the time?—was the great prostration present sufficient to contra-indicate the application of leeches to the temples, or cupping at back of neck? I thought so; and had the hair cut off, and ice applied to the head, instead—this, however, was not sufficient to obviate, not even apparently, to retard the violent inflammatory action going on in the brain; finally, I would ask, what relation is there in the symptoms of the above case to those noticed in the epidemic erysipelas of Indiana, U. S., in 1813, and known by the popular name of “Black Tongue?”

[The author of this paper will observe that we have put a heading to it, which he had omitted to do, and which we think characterises the disease described. This case possesses great interest as much from the severity of the disease as from the circumstance of its prevailing about the date of this case, as an epidemic, very generally through the country. It is our intention in the next number to detail several cases which occurred in this City, and we shall be obliged for the notes of any others of a similar kind which may have occurred in the practice of our readers, between the months of May and September. ED. U. C. J.]

ART. XXXVI.—*On the Nature and Treatment of Spinal Affections.*
By GEORGE PATON, M. D., M.R.C.S.E., &c.

[The following remarks were published in the *Edinburgh Medical and Surgical Journal*, No. 183. They are now re-printed with some emendations, as introductory to the views of the author contained in the latter part of his communication, to appear in subsequent numbers of this Journal]:—

There is a class of complaints termed cases of spinal irritation, which have of late received considerable attention from the profession. They are characterised by pains in various parts of the body, as the chest or abdomen, weakness in the limbs, shortness of breath, and inability to undergo exertion. Sometimes there is pain of the head, with giddiness, nausea, and pain at the stomach, with vomiting of food after meals, palpitation of the heart, and other distressing symptoms, which seem to simulate almost every disease to which the human body is liable. Not unfrequently, after the disease has existed for some time, weakness may be

complained of in one or more portions of the spine, which may be attended with nothing more than a slight uneasiness after walking or exercise; and on examination being made of the part, acute pain and tenderness is generally manifested on pressure. What may be the nature of this disease, or the state of system under which it is developed, is a question of much importance to determine, and respecting which various opinions have been advanced.

By the physicians of Britain, the disease has in general been considered as connected with the function of the spinal cord; hence the term *Spinal Irritation* has been applied to it. And the opinion most recently advocated is, that the pathological cause of the disease is congestion of the chord,—that, the veins of the spinal cord being destitute of valves, congestion is liable to take place in them in weak and cachectic subjects, and give rise to the various symptoms indicated in this affection, on the physiological principle, that pain is often felt at the extremities of the nerves, when the disease is seated at their origin, or centre of the nervous axis. But many of the French physicians believe that these affections have no connection with the functions of the spinal cord, but are dependent on the state of the general system, and are to be treated with remedies directed to this end.

If, however, we attentively examine the symptoms manifested in these affections, in connection with what we know of the physiological action of the spinal cord, and employ the same mode of reasoning in this as in every other science, in tracing an effect to its particular cause, there can be but little doubt that the function of the spinal cord is more or less involved in these diseases. When we find acute pains referred to particular parts of the chest or abdomen, where the existence of no positive disease can be detected, or the limbs affected with great loss of power and diminished sensibility, and apparently no indication of any morbid state in the brain to account for the symptoms; and when we perceive that, at a portion of the spine corresponding to the origin of the nerves which are distributed to those parts of the body, there is weakness complained of, with acute pain and tenderness on pressure; we are led to conclude that the cause of these complaints is connected with the functions of the spinal cord,—that the affection is of a spinal character. Accordingly, as a particular portion of the spine is affected, we find a corresponding set of symptoms. If the disease be in the cervical portion of the spine, the complaint follows the course of these nerves. There are pains stretching along the neck to the shoulders and fore-arms; or there may be weakness in one or both upper extremities. If the disease be in the dorsal region of the spine, we find difficulty on inspiration, shortness of breath on exertion, with acute pain stretching across the chest, frequently referred to the sternum or epigastrium. And if the lumbar region be affected, we have pains extending

across the abomen, with difficulty of micturition, and pains and weakness of the lower extremities. These are facts which a knowledge of the functions of the voluntary system of nerves enables us to explain, and to consider as resting on admitted data.

And perhaps the recent investigations of Valentin may throw additional light on this subject, and explain how some of the organic functions of the body may be influenced in these affections. This inquirer has shown, by numerous experiments, that irritation of the spinal cord affects the movements of the œsophagus and viscera of the abomen, through the medium of the sympathetic system of nerves; that in this manner contractions are produced in the stomach by irritating the roots of the lower cervical and first thoracic nerves; and that, by irritating the roots of the dorsal nerves, or of the lumbar or sacral, corresponding portions of the intestinal tube are affected. In short, the researches of Valentin show, that by means of the communication that exists between the fibres of the spinal and sympathetic system of nerves, irritation of the spinal cord affects the movements of the viscera of the abdomen. It is very probable, therefore, that on this principle may depend much of the pain and suffering connected with these functions of the body in diseases of a spinal character,—that irritation at the origin of the spinal nerves, communicated through the medium of the sympathetic, may influence the functions of the stomach and other abdominal viscera, and produce many of those symptoms which we witness in these affections.

One circumstance, then, particularly to be attended to in this class of diseases, is, that the most prominent and characteristic symptoms may be manifested in various parts of the body at a distance from the seat of the affection. Thus pains are felt at the extremities of the nerves, whilst the cause is connected with their origin; and the symptoms often appear so anomalous as to prove most perplexing to the physician, whilst, at the same time, they are most distressing to the patient. The sensibility, in some parts of the chest, may be so much increased, that the patient shrieks when it is touched, and can scarcely bear the pressure of the clothes on it. The integuments swell, and become acutely painful even on the pressure of the finger. There is often great pain, with irritability of the stomach,—pains and attacks like spasms in the bowels, accompanied with dysuria. There may be a feeling of tightness extending along the margin of the ribs, and affecting the power of respiration; or there may be weakness, with a sort of prickly sensation in one side of the body. In some cases, which the author of this paper investigated in the French hospitals, sensation was greatly impaired in one side of the body, whilst the motor power remained unaffected. In others, sensation appeared to be diminished only in a small part of the body, as in the integuments of one side of the chest, whilst the patient complained of general lassitude

and feebleness in the movement of the limbs. These are some of the symptoms of cases of spinal irritation which are frequently to be met with in practice, and are liable to be confounded with other diseases, or considered of a local character. But the symptoms do not readily yield to the remedies employed till attention is directed to the spine, when, by counter irritation and other appropriate treatment, the complaint, if taken in its early stage, will generally be subdued.

With regard to the pathology of this disease, in considering it to consist in congestion of the spinal cord, we confess we cannot acquiesce in this view of the subject. We do not see how congestion of the cord should give rise to the acute pain and tenderness on pressure of the spinal column that is manifested in these cases; more especially, since it is a well-known fact, that in inflammation of the spinal cord, pain often cannot be produced by pressure of the spine.* And the course of the veins of the cord renders them protected from all external influence, and equally from pressure applied to the vertebral column. Besides, from the intimate communication which exists between the spinal veins throughout the whole course of the spinal canal, and the free communication which they have with the *vena azuyos* and thoracic veins, &c., of the trunk through the intervertebral foramina, it is difficult to perceive how congestion should take place at one particular part, to such an extent as to interfere materially with the functions of the spinal cord. And if congestion did affect one portion more than another, it should be the lowest and most dependent portions, where the circulation is most under the influence of gravitation, and where the greatest force requires to be exerted to propel the contents of the vessels forwards. But in these affections we do not find the lumbar portion of the spine more affected than the other portions.

Besides, one principal reason why these veins are destitute of valves, is evidently to prevent congestion from taking place at particular parts of their course, and any injurious effects resulting to the functions of the cord. It is a well known fact, that during the act of inspiration the progress of the blood is accelerated towards the heart, and slightly retarded during expiration. And were these veins possessed of valves, a slight congestion would be produced at particular parts of their course during the act of expiration, which might influence the functions of the cord, and prove very injurious in cases of difficult respiration. But being destitute of valves, the retardation produced by the act of expiration is diffused over the whole, and not limited to particular parts of their course. Hence, the congestion in these vessels must be general before its effects can be greatly manifested, and not confined to one particular part of the spine, as the symptoms of the disease often indicate.

* Abercrombie on Disease of the Brain and Spinal Cord, page 381.

And this circumstance of the pain being often confined to one particular part of the vertebral column, and greatly increased by pressure, would indicate that the disease is of a local character, and seated in that portion of the spine. If we examine the spine in these cases, there is not much pain complained of on pressure being employed along each side of the vertebral column, which we expected if the disease had depended on congestion of the cord. But if we press the intervertebral spaces, in the centre of the spine at the part affected, acute pain is felt, the patient winces, or syncope may even be produced. And if we move the fingers laterally across the part, a sort of crepitation often seems to be felt, as if a slight effusion were present,—a fact which we believe has not previously been mentioned.

From these considerations we conclude that the disease depends on inflammatory action of a low specific character, affecting a part of the spine and its ligaments, and gradually involving the membranes of the cord. The disease often appears to commence at a very small spot of the spine, and may remain confined to this spot for a considerable time without giving rise to much uneasiness to the patient; and the symptoms may even disappear if the constitution regain strength and vigour. But if the disease proceeds, more serious effects ensue. The part of the spine affected becomes acutely painful on pressure; and then the functions of the corresponding portion of the cord become impaired, producing, according to the particular seat of the disease, diminished power of respiration or locomotion, &c. In short, as we shall afterwards see, the complaint may terminate in decided and permanent affection of the spine.

Another circumstance to which we must advert in connection with the pathology of this disease is, that these affections have been most frequently observed in females, and generally considered as peculiar to that sex, and connected with irregular menstruation. But we are of opinion that this is not the case; for many patients have come under our observation and treatment, labouring under this affection, who were perfectly regular in the uterine secretion during the whole period of treatment, and had continued so before any symptoms of the complaint had appeared. And the constitution may suffer from this disease at an early period of life, even before the age of menstruation, so that its non-appearance cannot in these instances be considered the cause. We have seen these spinal affections in young females before the age of twelve, who had been seized with the complaint, and suffered much from it for a considerable period, and who perfectly recovered before the appearance of the menses. And after the cessation of the catamenia, females who are free from every uterine disease may labour under these affections. We have witnessed cases of this nature distinctly manifested after the age of fifty, and the symptoms often prove

very tedious and difficult to remove. Hence it appears that the state of the menstrual function is not to be considered the cause of these affections or the ground of their development. Cases, no doubt, often occur where we find a patient labouring under what is termed Spinal Irritation, at the same time irregular in the uterine secretions; and the circumstance always occasions anxiety to herself and her friends, as they believe that on this much of her affection depends. But if we can place any reliance on observation, it is to be considered only as coincident, and not as connected with the development of the disease. We must in medicine, as in physical science, endeavour to trace every effect to its true and specific cause, in order to establish general principles. For we may rest assured that, however varied may be the phases which disease may assume, there is nothing anomalous in its character, but that it all depends on general laws for the development of its symptoms. And accordingly, in these different cases, we conceive that one general law operates in producing the affection.

It is further to be observed that these affections are not confined to females. They are also observed in men; at least symptoms perfectly similar, and yielding to the same mode of treatment are found to affect males; and it is very probable that they arise in a similar state of constitution. The patients, of both sexes, in whom these affections are most frequently observed, are those in whom there is an apparent want of tone and vigour in the constitution; where the functions of nutrition are languid, and there is indication of what is termed a strumous diathesis. Hence, attention has been directed to the state of the general health, and means employed to strengthen the system, and improve the digestive organs.

These complaints, we may also observe, have been considered of a hysterical character, and treated on that principle; and the various symptoms which they assume might have led to that conclusion, whilst pathology afforded nothing definite respecting their nature. But, by a more correct diagnosis, the spine has been pointed out as the seat of the affection. And perhaps it may be asked whether or not hysteria has its seat in the spinal cord, or is in some measure connected with the functions of that organ. At all events, since the subject of spinal irritation occupied the attention of the profession, the number of hysterical complaints has diminished, and there is little doubt, will be still further reduced as we obtain more correct views of the nature and treatment of disease.

But as the nature of these affections will be better understood from the perusal of the cases themselves, we shall describe a few that have come under our observation and treatment.

CASE I.—M. P., aged twelve years. This young lady has been for upwards of two years in a delicate state of health, and gradually lost flesh and strength. She is so weak that she is

scarcely able to stand erect, or walk without assistance; in consequence of which she is principally confined to the sofa. She complains of pain in the chest and abdomen, and weakness of the back, particularly felt when she walks or stoops. She has much pain and weakness of the limbs; the joints, as she describes it, bend under her, as if unable to support the weight of her person; and her legs frequently start up when in a quiescent state. She has also some difficulty in micturition. She is liable to severe headaches, and occasional giddiness. The appetite remains good; pulse 80; the bowels are constipated. For these complaints she has taken much medicine; but in the treatment of the disease no attention has been directed to the spine.

On examining the spine, tenderness is felt on pressure over all the dorsal region of the spine, but more particularly at the lower portion of it, the pain being most acute at the intervertebral spaces.

TREATMENT.—Blisters were repeatedly applied along the spine, and the patient took purgative medicines; and in three weeks she felt much better; the pains of the chest and limbs had diminished, and she had more power in walking. By the continuance of these remedies, accompanied with small doses of tonics, in about two months from the commencement of the treatment, she completely recovered, and was restored to the enjoyment of good health.

CASE 2.—M. A., a young woman, aged 21 years. This patient has been long in a delicate state of health. The complaint, she says, commenced with attacks of sick headache, indigestion, and vomiting of food, to which she is still frequently subject. She has severe pains in the chest, the integuments of which are so tender to the touch as scarcely to admit the pressure of her clothes on it. She is much affected with shortness of breath and palpitation of the heart on exertion, which renders it distressing for her to walk quick, or to ascend any eminence; and she is easily thrown into a state of cold perspiration. She complains of tightness across the epigastrium, uneasy sensations and distension of the stomach after taking food, from which she is often not relieved till vomiting takes place. She has severe pains in the abdomen, with difficulty of micturition, and even in evacuation of the bowels. Pressure on the abdomen aggravates her sufferings. She states that she feels pain and weakness in the spine; weakness and trembling of the limbs in walking; and aching of the joints after exercise. The pulse is 86; the tongue furred; the bowels constipated; the catamenia are stated to be regular.

As this person has been long an invalid, she has received much medical treatment for the removal of these complaints. She has had leeches repeatedly applied over the stomach, and blisters have been applied to arrest the vomiting, and remove the pain in the

bowels. Blisters have also been applied to the chest; and she has taken much medicine internally. Attention has not been directed to the spine.

No indication of disease can be detected in the chest after the most careful examination. There is pain on pressing the abdomen, but not that acute tenderness which is observed in peritonitis, and its other symptoms are absent.

On examining the spine, tenderness is felt over a great portion of the dorsal vertebræ, and also to a considerable extent in the lumbar region. Pressure in some of the intervertebral spaces causes the patient to wince and start up.

TREATMENT.—Blisters were applied several times across the spine; she took preparations of iron, &c., and occasionally purgatives, containing small doses of croton oil, to keep the bowels free. Exercise was interdicted, and the patient was ordered to preserve the horizontal posture as much as possible. Under this treatment she improved. The vomiting ceased; her appetite increased; and she had greater power and vigour in the movement of her limbs. But the pain and weakness of the spine not being removed, and some of the symptoms still continuing, close to the spine were established two issues, which produced decided relief. The pains diminished; she gradually gained strength; and in the course of a few months was restored to better health than she had enjoyed for years.

CASE 3—J. D., a young gentleman, aged 26 years, complains much of giddiness and pain of the head, with severe pains and weakness of the limbs, being easily fatigued, and oppressed with slight exertion, and has greater weakness in the left leg than the right. He is frequently attacked with severe pain and spasm referred to the bowels, with tightness of the chest, and difficulty of breathing; and has generally much irritability of stomach, with indigestion of food. These complaints he had felt more or less for the period of two years; but of late they have increased to such an extent as to render him unable to undertake any considerable exertion without much suffering, or being afterwards confined to his room for several days. The pulse is 82; the tongue furred; the bowels are constipated. He has felt, he says, little or no pain in the back; but on his attention being directed to it, states that it does feel painful on stooping, and that he has a little difficulty in micturition. The remedies employed have principally been directed to the state of his stomach and bowels, and purgatives have always afforded temporary relief.

On examination of the spine, acute pain and tenderness are felt on pressure being applied to several portions of the dorsal and lumbar vertebræ; the pressure on the intervertebral spaces causing him to wince, and start up involuntarily.

A potass issue was applied to the lower portion of the dorsal

vertebræ, and another considerably higher up the spine, at the part where the pain was most severe on pressure; and he was ordered to remain as much as possible in a horizontal posture. Purgatives were exhibited to keep the bowels free, and iron was administered as a tonic; and, in the course of a few weeks, he expressed himself decidedly better. By the time that the issues began to heal,—about eight weeks from the commencement of the treatment,—he had regained strength and vigour in his limbs; the pains and attacks like spasm in the bowels, with which he was so frequently seized, had disappeared; and he was so far improved in every other respect as to consider himself convalescent. This patient has continued to enjoy good health ever since; and since that period three years have elapsed.

CASE 4.—Mrs. W., a married woman, aged 38 years, who has had several children. This person complains of great and increasing debility,—pains of the chest, with shortness of breath, and palpitation of the heart on exertion. She has frequently severe pain and distension of the stomach after food, pain in the bowels, and difficulty in micturition. Sharp pains frequently dart down the thighs, and she feels great weakness of the limbs in walking, being fatigued and thrown into a state of cold perspiration by very slight exertion. These complaints, she states, have been of more than two years' duration, and generally been considered of a hysterical nature. She has been repeatedly leeches and blistered over the stomach, and had much medicine exhibited for her relief; having been frequently under medical treatment during the period of her illness. The complaint had not been considered as connected with the spine.

On examination of the spine, tenderness is complained of over all the dorsal region; the patient winces under the pressure, and states that it affects her much.

By the repeated application of blisters to the spine, in conjunction with the exhibition of strong purgatives, she improved and gained strength; the pains of the chest and limbs, and other disagreeable symptoms abated, and in the course of a few weeks she considered herself well, and restored to health. On convalescence, the catamenia became regular. She has continued in good health, and nearly three years have elapsed since that period.

CASE 5.—F. N., a young gentleman, aged 28 years. This patient has felt his health declining for nearly three years. He is less capable of enduring fatigue than formerly; perspires easily, and is very languid after exertion. At the commencement of these complaints he was affected with headaches, giddiness, and slight dimness of vision, which frequently attacked him suddenly when walking, rendered him liable to stumble, or almost to fall. Shortly after this he was seized with difficulty in breathing, which sometimes amounted to great oppression, as if he had no power to open

his chest sufficiently. These symptoms still continue, and are particularly felt on ascending an incline, when he is often obliged to stand to take a full inspiration, and at the same time, sharp pains shoot across his chest towards the sternum. The appetite is impaired, accompanied with indigestion, nausea, pain of stomach, and occasional vomiting of food. He often feels considerable uneasiness in his back after walking or much exercise, which causes him to assume the horizontal posture, from which he always obtains relief. He has frequently pain in his bowels, and a slight difficulty in micturition, pains in his loins, and darting down his thighs, and is feeble in the movement of his limbs. The left leg is weaker than the right, and they are liable to start up when at rest. Pulse 84; tongue slightly furred; bowels constipated.

There is no indication of disease in the chest or abdomen.— On employing pressure along the spine, pain is complained of at the upper part of the dorsal vertebræ, and also between the first and second lumbar vertebræ. At these parts issues were applied, and he was ordered to retain the horizontal posture, and to take purgatives. In the course of two weeks his symptoms began to improve. He could respire with more freedom; the nausea and pain of stomach had abated, and he had greater power in the movement of his limbs. We now employed gentle tonics, and still continued the use of the purgatives; and, in the course of a few weeks, renewed the issues, which had begun to heal. He still, however, continued the occasional use of the purgatives, which had always afforded him relief; and, in a short time, he felt himself strong, and restored to good health.

CASE 6.—J. S., aged 33. This person has, for a considerable time, been in a weak and delicate state of health. He complains much of uneasiness in the lower part of the back, with difficulty passing his urine. He feels great inconvenience from stooping, as the pain becomes severe on raising himself into the erect position. He is liable to headaches and giddiness, being sometimes apt to fall whilst walking. He states that he has less power than formerly in moving his limbs; that a cold sensation runs down the outer side of the left thigh; and that this limb is weaker than the right. Is easily fatigued by walking, and perspires much after exercise. His legs also often start up involuntarily when in bed, or remaining much in a quiescent state. These complaints had been considered of a rheumatic character, were treated on that principle, but with little or no abatement of the symptoms. Pulse 84—tongue furred in centre; appetite weak; bowels regular.

On examining the spine, acute pain is felt on pressure being applied to the intervertebral spaces on the lower portion of the lumbar vertebræ, and slight tenderness is also complained of at one spot of the dorsal vertebræ; but the sensation does not appear to be impaired in the integuments of the limb.

Potass issues were applied at that portion of the lumbar vertebræ where the pain on pressure was most acute. Powders, consisting of a preparation of iron, were exhibited internally; and he was recommended to retain the horizontal posture as much as possible, and to take a croton oil pill occasionally. In a few days he stated that he felt himself better than he had been for several months; that he had regained complete power over the function of the bladder; that the strength and energy of his limbs were improving; and in a few weeks he felt so well as to engage in a very active occupation.

CASE 7.—J. P., a man aged 45. Has for these last twelve months felt considerable pain and weakness in the lower part of his back, during which period the state of his health has been much impaired, being easily fatigued, and liable to perspire on slight exertion. The complaint of his back has increased of late, rendering him unable to undergo fatigue, as the pain is always worse with exercise, and easiest whilst he remains at rest in the horizontal posture. He has also a constant painful sensation in the lower part of the abdomen, immediately above the pubis, with difficulty in micturition—a complaint which distresses him much. He states that he has less energy than formerly in moving his limbs, which is particularly evident in descending a declivity, when his knees, as he expresses it, nearly bend under him. Acute pains are felt extending down the thighs, and his legs occasionally start up when at rest. Pulse 80; tongue furred, and appetite weak.

On examining the cervical and dorsal portion of the spine, he does not complain of pain. But tenderness is felt on pressure at the intervertebral spaces of the lower portion of the lumbar vertebræ.

At the place now mentioned a potass issue was applied, and he was recommended to assume the horizontal posture, and to take tonics of columba, &c. In the course of a few days he was decidedly improved in health, had greater power and freedom in passing his urine, and felt stronger and more vigorous in his limbs; and in about two months, was so far restored to health, as to engage in the duties of an active occupation.

CASE 8.—J. C., a young woman, aged 26. Nearly four years since, she felt her health beginning to decline, became weak, languid, and more easily fatigued than usual. Shortly after the commencement of these complaints, she was attacked with headaches and giddiness, which affected her walking, rendering her sometimes liable to fall, or to seize hold of an object. She had also acute pains in the arms, with a sort of prickly sensation in the fingers. These complaints have continued more or less since the commencement of her illness, without being much benefitted by the remedies employed for their removal. At present she suffers greatly from irritation of stomach, nausea, and vomiting of food.—Is liable to giddiness and dimness of vision; and has often severe

pain across the lower part of the abdomen, which amounts almost to tormina, if she has taken anything difficult of digestion. There is often an uneasy sensation in the lower part of the spine; and she complains of pain and weakness of the limbs in walking. She seems to walk with difficulty across the room. Pulse 82; tongue furred; bowels constipated; Catamenia have always been regular.

For these complaints she has taken much medicine; has been blistered on the epigastrium, and at the part of the chest where the pain was most severe. But no attention has been given to the spine.

On examining the spine, acute pain, and tenderness on pressure, are manifested along its whole course, but more particularly about the lower portion of the dorsal vertebræ, where pressure in the intervertebral spaces causes her to shriek.

Counter-irritation was applied to the lower portion of the dorsal vertebræ, where the pain was most severe on pressure. She took purgatives, and small doses of preparations of iron, and was ordered to retain the horizontal posture. Shortly after the application of the counter-irritation, she considered herself worse; the pains of the abdomen and limbs increased, &c. But in the course of several days the symptoms began to improve, and in a few weeks she was decidedly better, and had more power and energy in the movement of her limbs. Counter-irritation was then applied along the upper portion of the spine, and the other remedies were continued, and succeeded by still greater relief. The nausea and vomiting abated; the pains of the chest and weakness of the arms were removed; her strength increased; and in a few months she expressed herself well and in good health.

CASE 9.—A young girl aged 10 years. This patient fell down suddenly in a state of insensibility, from which she could not be aroused for some time. On coming out of this state, she appeared wild and delirious, talking incoherently, and was unable to give a proper description of her feelings. She seemed weak and anæmic, with a quick excitable pulse, and furred tongue; and her parents stated that she had felt delicate for a considerable period. On examining the spine, much sensibility was evinced on pressure being applied to the upper part of the dorsal vertebræ. She shrieked and complained of pain. A blister was applied to this part of the spine, and a dose of purgative medicine exhibited; and next day she was much improved, calm, and collected. She stated that she had of late been liable to giddiness in walking, that she felt acute pains in her side and chest, and weakness in her limbs, that her appetite was bad, and she perspired on very slight exertion. Preparations of iron were exhibited, and her bowels kept free by aperient medicine; and in a few days she was perfectly well.

This is a case in which the symptoms might very readily have

been referred to the brain, and treated on active principles. And it is very probable, had this mode of treatment been adopted, it would have proved most injurious to the patient. But attention being directed to the spine, the seat of the disease, and appropriate remedies employed, she speedily recovered.

CASE 10.—Mrs. R., aged 28, married, and has had one child. About two years since she fell into a delicate state of health; she became weak, and easily fatigued; was affected with headaches and giddiness; pains in the side, and palpitation of the heart on exertion. Her appetite was bad, and she suffered much from indigestion and vomiting of food. She had severe pain extending along the margin of the ribs, on the right side of the chest, increased by walking, stooping, and every kind of exercise, which often became so acute as to prevent the pressure of her clothes on it. The complexion also assumed a dingy yellowish hue, like that of a person whose biliary secretions were deranged, which led to the belief that her liver was affected.

She states, that of late she is sensible of increasing weakness in her arms, which have become affected with a sort of prickling sensation in her fingers, that extends to the elbows, and gradually to the shoulders, and that then the pain becomes particularly severe. She is also seized with sharp shooting pains in the mammæ, in the chest and in the sides, and extending across the lower part of the abdomen, and has considerable difficulty in micturition.—She does not complain of much pain or uneasiness in the spine, but of weakness of her limbs, and severe aching pains in them after exercise. Pulse 78; tongue white and furred in the centre; bowels constipated; catamenia regular. In the treatment of this complaint no attention had been directed to the spine.

On examining the spine, she complains of tenderness on pressure in several parts of it, but more particularly at the upper portion of the dorsal vertebræ. To this counter-irritation was applied, and she was at the same time ordered to take croton oil pills as a purgative, and small doses of preparations of iron. Shortly after the application of the counter-irritation to the spine she felt worse; the pains of the arms, the chest, and the side, increased; and she had more frequent attacks of vomiting of food. But in a few days these symptoms abated, and then the counter-irritation was applied to the other parts of the spine, where the pain was most acute on pressure, and the other remedies continued; and in the course of two months she considered herself well, and restored to excellent health. In this case signal benefit seemed to be derived from the exhibition of the croton oil pills.

The consideration of the cases now adduced demands the following observations:—

1st—From these cases we perceive the variety of symptoms which affections of this class assume, and how liable they are to be

mistaken for other complaints, and treated on erroneous principles. The pains are felt at different parts of the body, and general lassitude, or want of power in a particular limb, is complained of, but no cognizance is taken of the spine, the seat of the disease. And it is often only after the complaint has existed for some time, that the patient becomes sensible of weakness in that part of the body, and the attention of the physician is directed to it. Hence it is of the utmost importance, in those cases where positive disease cannot be detected in the viscera, which appear to be the seat of severe and protracted pain, to examine the spine, and see if tenderness be not recognized on the slight pressure of a particular part. We have thus seen symptoms which had resisted much treatment, speedily disappear, and patients restored to the enjoyment of excellent health, after great debility and suffering.

2nd—The disease depends on inflammatory action of a low specific character, affecting a particular portion of the spine, as the symptoms evidently indicate. The painful feeling is increased by external pressure, which is most distinctly manifested at the intervertebral spaces; a very slight pressure with the point of the finger on this spot often causes the patient to shriek from the severity of the pain. It is also aggravated by walking, stooping, and every kind of exercise that increases the motion of the spine, and relieved by rest and the horizontal posture,—which cannot be accounted for by congestion of the cord; and if we move the fingers across the part a sort of fulness or puffiness often may be felt, as if a slight effusion were present,—a symptom which is not recognized in a healthy portion of the spine. In short, the acute sensibility to pressure manifested at a particular part of the spine, in accordance with the other phenomena, clearly indicate that the disease must be considered of an inflammatory character, and not dependent on congestion.

TREATMENT.—This affection not being dependent on what is termed acute inflammatory action, but on inflammation of a sub-acute or specific character, occurring in patients where there is a want of tone and vigour in the constitution, does not admit of active antiphlogistic treatment, and general bleeding is not well sustained. We have seen cases where it had been repeatedly employed, with no benefit to the patient, but an aggravation of the symptoms—being followed by greater weakness, and an increase of pain and irritability. Even local bleeding, as cupping and the application of leeches, which may be employed with greater freedom, does not seem so productive of benefit as counter-irritation to the spine.—The treatment which we consider the most beneficial, is the frequent employment of purgatives, and the croton oil pills will be found of essential service, exhibiting at the same time, preparations of iron as a tonic, accompanied with rest in the horizontal posture, and counter-irritation to the spine. And, in reference to the last

remedy, we may observe, that blisters do not appear so efficacious as a strong rubefacient, or ointment of tartarised antimony, rubbed along the vertebræ, till a copious eruption appears at the part where the pain and tenderness on pressure is complained of. But when the affection is most severe and of long standing, a few potass issues applied along the spine are productive of the greatest benefit. These are the remedies deemed most efficacious in the treatment of this affection,—from the employment of which we have most frequently witnessed an improvement in the symptoms, and ultimately the restoration of the patient to health.

(To be continued.)

TORONTO, OCTOBER 15, 1851.

THE PROFESSION.

It is undoubtedly a source of reproach to the Medical Profession in Upper Canada, that there exists no means of regulating its internal economy, no tribunal of Professional opinion, before which offenders against etiquette and morality—which in other countries and from a remote period of time, have been respected and upheld—can be arraigned and punished. There are offences and delinquencies of a grave nature, involving important results to the honour of the Profession of Medicine and the welfare of the community, which do not strictly come within the pale of ordinary jurisprudence. Moral crimes, which can be, and often are perpetrated, under the cloak of the professional character, cognizable principally by those engaged in similar pursuits, and susceptible of restraint only by those, against whose interests and reputation they so materially militate. It would be bootless to inquire into the causes of this deficiency; they must be sufficiently evident to all who take the trouble to reflect upon them, and are doubtless the source of sincere regret to every one, who takes an interest in the progress and fame of the honorable profession of which he is a member. Bitter as this regret must be, it is much enhanced by the knowledge that every attempt which has hitherto been made to engage the co-operation of the Legislature in securing the right of self-government, has proved a failure. A question naturally arises as to the practicability of establishing a jurisdiction such as would be efficient for the end desired, independent of Legislative authority, by association among ourselves. Examples of such a power so created are not wanting, even in this Province. It is true that the objects of these voluntary professional associations are chiefly those of literary and scientific improvement, and that the obligation to observe any restrictive code of regulations would necessarily be

purely one of conscience and honour, and to be enforced principally by the forfeiture of membership, and the status which such a privilege confers in the community. The establishment then of a "Provincial Medical and Surgical Association" would appear to be a most desirable step towards the attainment of that which we contend for. An Institution under the more comprehensive title of the "British American Medical and Surgical Association," was organized at Three Rivers, in the month of July, 1850; and at the meeting at which this organization took place, a resolution was passed that its next session should be held at Kingston, in the month of May, of the present year. We apprehend that this meeting never occurred, at least we have never seen, to the best of our recollection, any record of it; nor do we know whether the association is still considered as extant. If however it has proved a failure, we ought not on this account, to be deterred from making the attempt to establish one for the Upper Province. There are many physical objections to so complete and extensive an organization as was then contemplated—obstacles which are removable, and which may eventually be surmounted, through the instrumentality of the Great Trunk Railroad! and other more complete means of intercourse than at present exist.

Our present wish is, however, to suggest the idea to those who are from experience better able to point out the means and manner by which such an Institution can be properly organized, and successfully carried on. Our pages shall be freely open to contributions towards this good work, and we earnestly invite a free discussion of the subject.

THE "BRITISH AMERICAN MEDICAL & PHYSICAL JOURNAL."

WE are delighted to find our contemporary in such good humour and spirits, and congratulate him heartily on his convalescence. May his ink never be dry! As long as it contains no gall, we shall be happy to call him any name he pleases. We acknowledge the receipt of his *first* exchange. Our denition proceeds rapidly and favourably, the teeth being strong and sharp.

MEDICAL NEWS.

WE glean the following items of intelligence from recent publications:—

"MEDICAL PRACTITIONERS IN BOSTON.—There are two hundred and thirteen medical men in the city belonging to the State Medical Society, fifty-one are enumerated with it, acknowledging obligations to no medical association, twenty are denominated botanic physicians, who look upon all the others as dangerous dealers in physic; while six female physicians, quite independent of any of the rest, complete a catalogue of three hundred and fifty persons, who sustain themselves in a population of 130,000, by prescribing and giving medicines."—*Boston Med. and Surg. Journal.*

ANNUAL ANNOUNCEMENTS.

There lie before us the announcements for the ensuing winter session, of the Faculty of Medicine of the University of McGill College, of the Toronto School of Medicine, and of the St. Lawrence School of Medicine, all bespeaking vigor on the part of the respective bodies. On the part of the University of McGill College, we are instructed to announce, that as qualifying for the degree, the tickets of the Incorporated Schools will be received, *one full course being completed within the University by the matriculant.*—*British Amer. M. & P. J.*

THE CHOLERA IN QUEBEC AND MONTREAL.

This fell and intractable disease has re-appeared among us, but by no means to a large extent, and emphatically shorn of its epidemic virulence. Quebec has suffered far more than this city. By private advice, we have learned that from the 26th of August to the 24th September, about 160 deaths had occurred from it, but the disease was rapidly declining. In Montreal we doubt if more than 50 or 60 cases have occurred *in toto*; but we have no means of determining the actual mortality from it. The supervention of cold weather will, we presume, as heretofore, arrest the further progress of the disease. In other respects the two cities have been remarkably healthy. It was rumoured that some cases had occurred at Kingston, with what truth we know not.—*Ibid.*

LIST OF ASSURANCE OFFICES WHICH RECOGNIZE THE PRINCIPLE OF REMUNERATION TO ALL MEDICAL REFEREES.

Architects, 69, Lombard-street, London. Britannia, 1, Princes street, Bank, London. British Mutual, 17, New Bridge-street, Blackfriars. Church of England, Lothbury. Commercial, 112, Cheapside, London. East of Scotland, 1, Bank-street, Dundee. Engineers, Masonic, and Universal, 345, Strand. English and Scottish Law, 12, Waterloo Place, London. English Widows' Fund, 67, Fleet-street. General and Mining, 4, Bridge-street, Blackfriars.—General Benefit, 4, Farringdon-street. Great Britain, Waterloo Place, and King William-street. Indian and London, King William-street, and 14 Waterloo Place. Industrial and General, 2, Waterloo Place, Pall Mall. Kent Mutual High-street, Rocheater. Kent Mutual Life Assurance Society, 6, Old Jewry, London. Leeds and Yorkshire, Commercial Buildings, Leeds. Legal and Commercial, 73, Cheapside. London Indisputable, 31, Lombard-street. London Mutual Life, 63, Moorgate-street, City. London and Provincial, 39, Nicholas Lane. Medical, Legal, and General, 126, Strand. Medical Invalid, and General, 25, Pall Mall. Metropolitan and General, 27, Regent-street, Waterloo Place. Mitre, 23, Pall Mall. National Loan Fund, Cornhill.* National Mercantile, Poultry, Mansion House. New Equitable Assurance Company, 450, West Strand. North of England, 11, Cheapside, London, and Old Haymarket, Sheffield. Professional, 76, Cheapside. Prudential, 14, Chatham-place. Royal, Royal Insurance Buildings, Liverpool. Royal Exchange, Royal Exchange. Royal Farmers and General, 346, Strand. Scottish Equitable, 26, St. Andrew's Square, Edinburgh. Sovereign, 5, St. James's-street. Solicitor's and General, 57, Chancery Lane. Star, 44, Moorgate-street. United Kingdom Life Assurance Company. Westminster and General, 27, King-street, Covent Garden. Yorkshire, York.—*Ibid.*

* Why does the branch establishment of the National Loan in this city not follow the practice of the parent establishment.—ED. B. A. J.

SELECTED MATTER.

MÉDICINE.

DIAGNOSTIC AND THERAPEUTIC REMARKS ON RENAL ELIMINATION.

By Dr. J. S. Sutherland, Leamington.

The eliminating power of the kidney being strictly of a purifying nature, and consequently of essential value to the due performance of the other organs, is, perhaps the very first function impaired in disease, whether acute or chronic; and in virtue of this aptitude to take on diseased impression, it forms an index of disease, as certain as the mercurial column does of the atmosphere. A diagnostic scale may thus be formed. Thus inflammation and congestion of an active nature are accompanied by urates—uric acid, albumen. Passive congestion and neurosis are indicated by oxalates, pho-phates, &c., whilst cystic saccharine matter, purulent deposits, animalcules, and the various pigmentous secretions, lead to the supposition of special and deep seated, if not organic causes of mischief.

But it is not only necessary to detect these—the value of each must be specially estimated, both by itself, and also when met with in conjunction with another symptomatic product of the renal secretion. There may be a rapid change in function, indicating as rapid a change in the nature of the disease.—Thus spasms may imitate an inflammation in almost every respect but that of the condition of the urine—the urine will be found pale and devoid of solids; but when the secretion either suddenly or gradually acquires density and acidity, let the practitioner be on his guard, for real inflammation is at hand—the nervous disorder has run into its antitype, inflammation.

The products of the kidney, both natural and morbid, are easily distinguished by chemical re-agents, and especially by the microscope; but to render this beautiful study subservient to the diagnosis of disease in remote organs, as well as in the renal glands themselves, it is of much importance to simplify; chemical processes require time, and a sufficiently powerful microscope is a bulky instrument. It is only, therefore, in the study they can be used advantageously, where nice manipulation can be had recourse to; and a frequent practice of it in the study leads to an analytical education of the eye, which will, in a great majority of cases, be sufficient to point out the necessity or otherwise of more minute analysis. The eye, with the assistance of a small pocket urinometer, can easily recognise:—

First, colour indicating undue acidity, excess of urea, bile, pigments, &c.

Second, absence of colour, indicating deficient urea, deficient acidity, deficient consistency, &c., except in diabetes.

When the diagnostic value of colour is combined with that to be obtained from a knowledge of the specific gravity, we gain a further step; for instance, combine pale secretion with low specific gravity, the probability is that Bright's disease is indicated; combine pale secretion with high specific gravity, we have diabetes. Moreover, high specific gravity, combined with high colour, undoubtedly indicates actual power or inflammatory disease; but as high colour *may exist* with low specific gravity, and *vice versa*, although rare, it becomes necessary to use the urinometer constantly.

By generalizing, simplicity is aimed at. As an example of the difficulty of bedside analysis, suppose the practitioner is called to give an opinion, and finds diuresis a prominent feature. Moor's and Fronum's tests for sugar require solution of potash, sulphate of copper, test tubes, and a spirit lamp; these are difficult of application, even if present. The test by yeast, and that by polarized light, are quite impracticable; the microscopic test for spores requires heat of several hours' duration.

With a view to simplify this detection of sugar, and with the limited experience of four cases of diabetes occurring within the last four years, we have observed a very characteristic effect result from tincture of the muriate of iron employed as a re-agent on urine of a saccharine nature. To a test tube half filled with suspected urine add two drops of tincture, gently and carefully dropped, so as not to run down the side of the tube. If sugar in any quantity is present, an opalescent albuminous-looking troubling takes place to the depth of a quarter of an inch from the surface, which gradually becomes crimson.

The tincture of the muriate of iron produces no action on uric acid, urates, oxalates, phosphates, or albuminous urine; nor with that characterized by an excess of urea. Without asserting, upon such a limited number of experiments, that this test is infallible, or possessed of any delicacy in detecting minute proportions of saccharine ingredients, it seems well adapted for general use.

There is one point intimately associated with the physiology of depuration, which has not been sufficiently dwelt upon by writers on this subject, viz., the almost total inefficiency of diuretic medicines in exciting depuration, for aqueous filtration is not depuration. Depuration, or the elimination of effete tissues in the form of salts, is the office of the tubuli uriniferi. Aqueous filtration is the office of the Malpighian bodies: the latter are comparatively easily excited to action; the former are little under the influence of drugs. Water, therefore, may easily be separated from the blood, leaving the poisonous effete matter more concentrated, and consequently more poisonous; diuretics are, therefore, directly injurious. This is self-evident, and points to the cause of failure in the treatment of calculous disorders, when chemical antagonism forms the principle of action, namely, the total incompatibility of dynamic or vital chemistry with the science of the crucible and alembic. Before calculous disorders can be successfully treated by chemical re-agents, these re-agents must be used in such required proportions as to correspond exactly with the assimilation. In order that these may thus correspond, the atomic proportions, which rule with despotic power every chemical action and its results, must be adhered to, to an atom. A fraction of a grain of an acid or an alkali, or a still more subtle aura of a gaseous fluid, is enough to alter totally a chemical substance. Chemically speaking, the difference between sugar and oxalic acid and starch is inappreciable to the senses, and almost as inappreciable by chemical analysis; yet the one is convertible into the other by the vital chemistry of digestion. Differing from each other only in an atom of chemical proportion, a very common-place disorder, or a very fatal disease, is elaborated.

With this proof of the delicacy of dynamic chemistry, is it not, at the least, of questionable propriety to give acids and alkalies, and metals, in utter ignorance of the quantities required to produce a required chemical result? Nor must it be forgotten how various are the elements that enter into, or that forward or retard, a chemical action. Thus, disproportion of elements of food, noxious ingredients therein, temperature, consistency, superabundance, defi-

ciency, are all involved in the chemistry of assimilation; to these may be added the more subtle influences communicated by the senses, the stimuli to which, whether excessive or deficient, whether too intense or too prolonged; all bear a part in the process; receiving impressions derived from chemical, mechanical, electric, calorific, and psychological agencies, and further modified by anatomical confirmation, age, sex, and influence of the will.

This may, in a way, illustrate the potentiality of vital chemistry; but it fails to give any idea of its infinitesimal power. The alveolar glands of the cobra de capello secrete a fluid, which, to the great Leibig's analysis, betrays nothing beyond the chemical properties of gum-water; yet a drop of this gum-water, not more an entity to the eye than the tiniest dew-sphere on the petal of a rose, possesses wholly within itself a mysterious power, fearfully destructive to life. In what laboratory was that little globe formed? But the physician who expects to control the chemistry of digestion by acids, and alkalies, and metals, might just as well attempt to form such a sphere; they are both chemical actions of a vital nature, equally occult, mysterious, and unapproachable by human skill.

Another point in the diagnosis of disease, too little adverted to by practical men, is the elimination of urea; for the term deuration applies to all the solid ingredients of the renal secretion. An excess of urea is a rare disease, and may be considered a disease of colliquation. A deficiency of urea is a common disorder, and may be considered of importance according to its completeness and permanency. Deficiency is entirely characteristic of chronic disease, and being the substance into which the nitrogenous elements of food are converted, and afterwards eliminated, its retention most naturally occasions cause for alarm.— In a large proportion of chronic diseases urea is accumulated in the system, through impaired integrity of the eliminating organs, the kidneys, but there is much reason to suppose, that a compensating eliminatory process is set up in the skin and the lungs, and probably, also, in the bowels. That the skin throws off urea, may be proved by applying to the stomach a pad, wrung out of cold water and occasionally renewed; in a few days a strong odour of urea will be exhaled from the surface covered by the pad; but this will only occur if urea exists in the blood in any seriously abnormal quantity.

If the skin, the lungs, and the bowels did not take up the vicarious duty of the kidney, hysteria, which is by no means a disease of a fatal nature, would be immediately dangerous to human life, for in that disease urea is most imperfectly eliminated; and this feature of hysteria leads to a further consideration, namely, the individual part borne by retained urea in developing other pathological conditions indirectly connected with hysteria. The most interesting of these, occasionally a precursor, but more frequently a sequela of the disease, is undoubtedly anæmia, and its prototype chlorosis.

"Bright's disease" of the kidney, has generally been supposed to be characterized by albumen, or fatty globules; but it is much more so by deficient urea, for in reality, it is only in the early or inflammatory state of the complaint that albumen is eliminated. In regard to urea, colour, and specific gravity, the renal secretion of hysteria and Bright's disease are exceedingly similar, for neither albumen nor fatty globules are essential in the latter disease. How then are they to be distinguished in the female? Not by the examination of the secretion during its ordinary state, but by the examination of it when casual acute disease has temporarily excited the vitality of the eliminating organs; and which, if Bright's disease be present, will again present an albuminous condition of the urine.

The point of resemblance between the two diseases are threefold; viz., 1st Deficient elimination of urea? 2nd. Superabundance of urea in the blood; 3rd A great tendency to diminish blood-making power.

Analogy of pathological condition in diseases usually considered distinct, may lead to deductions, if not of absolute practical value, at least, of some interest in a philosophical point of view; thus in both diseases above-mentioned, the presence of urea in the blood is incompatible with the existence of the red blood corpuscle—the latter is gradually annihilated. Urea and iron are obnoxious to each other, the blood disc is chemically changed by the urea, and the well known endosmotic property of the enveloping membrane affords every facility for a chemical action. But when the antagonism and chemical re-action on each other of red blood and urea are referred to, the one a result of primary the other of secondary assimilation, the vital chemistry which presides over the process must not be confounded with the science of the laboratory; nor must it be expected that the red blood corpuscle when brought in contact with healthy urine, must become blanched as it is in a blood vessel, the fluids of which are contaminated by urea.

Is there any direct evidence that such a complicated action as the digestion of aliment is under the control of chemical re-agents? and is there any principle upon which the accomplished physician prescribes them? He certainly endeavours to avoid ingredients which he knows would, in a chemical sense, neutralize each other or produce new compounds. But beyond this all principle of chemical therapeutics is wanting. If acids, and alkalies, and metals are prescribed in clumsy doses, the physician must calculate that only so much of the substance is to be assimilated as may be required for a chemical action, and that any superabundance must be eliminated by the various emunctories; but in order that this theory may be supported, he must forget that nothing of a soluble or digestible nature passes off from the system, except as eliminated from the blood itself. If the metal iron be taken as an example of chemical therapeutics, it will be found that every practitioner has his favourite preparation of it. He generally chooses the latest invention; he has run up the carbonates, muriates, sulphates, citrates, and has at length arrived at the proto-ioduret, which sounds well in a prescription, and is distinctly chemical in its nature. It is therefore necessary to investigate the action on digestion which this substance may be expected to exert. Can any body say what part is enacted by the iron and what part by the iodine? Can he say whether a chemical action at all is formed within the body, or whether a compound of a most deleterious quality may not be formed, for we know that iodine is often retained in the system with much injury to it.

Again, it is no uncommon thing to prescribe acids upon the same principle, and even to combine them. Thus hydrochloric acid, for neutralizing various conditions of the urine, viz., alkaline, oxalic, and even lithic acids. But a higher degree of accomplishment in chemical therapeutics, lead the physician to prescribe the nitro-muriatic acid in such cases. Can he state the chemical action that takes place?

It must be evident to many, that chemical therapeutics have arrived at such a state of advancement as to savour of the mysterious if not of the visionary, and that the man who retraces his steps towards the ancient simplicity of Hippocrates may not be on the worst road of the two. Nor is evidence wanting that such a retrograde movement is in progress.—*The Institute*, Jan. 25, 1851.

SCARLATINA.

Dr. Volz has recorded his experience of a severe epidemic of scarlatina in Carlsruhe, from which he draws the following deductions:—

1. The extent and redness of the eruption are not in direct ratio to the severity of the disease.
2. The proximate cause of the exanthem is a stasis in the cutaneous capillaries.
3. The exfoliating scales of epidermis do not transmit the contagious principle of the disease.
4. The mucous membranes undergo the scarlatinous eruption equally with the skin.
5. The lesions of the throat are of three varieties—catarrhal, inflammatory, and gangrenous.
6. The inflammation of the parotid which accompanies scarlatina, seldom terminates in suppuration: that which follows the subsidence of the exanthem, often suppurates.
7. In the consecutive anasarca the alterations in the kidney are secondary, and depend on the change in the composition of the blood.
8. Death may occur in scarlatina from the following causes: congestive apoplexy, suffocation, pyæmia, and anæmia.—*The Philadelphia Medical News.*

SURGERY.

ON PARACENTESIS VESICÆ IN RETENTION OF URINE FROM STRICTURE OF THE URETHRA.

By *Branby B. Cooper, Esq., F. R. S.*

Mr. Cooper in a clinical lecture delivered at Guy's Hospital, remarks, that although the operation of puncturing the bladder per rectum is recommended as the most simple and safe operation for the relief of retention of urine depending upon stricture of the urethral canal, yet its discriminate use would be highly prejudicial. He then proceeds to point out the cases in which he considers it ought, and in which it ought not, to be resorted to. He says,

Surgeons admit three ways of performing the operation of paracentesis vesicæ, namely, puncturing above the pubes; puncturing through the rectum—or vagina in the female; and lastly, cutting through the perinæum. Of these three, I shall exclude the first, as being, in my opinion, the most dangerous, the most liable to lead to the extravasation of urine, and the consequent formation of abscesses, and the most likely to be followed by injurious consequences, from the pressure of the canula on the coats of the posterior part of the bladder, which is allowed to remain for some time, as is frequently requisite. If, then, this exclusion be just,—and, according to my experience, I hold it to be so,—it follows that we have only a choice of one of two operations, and to one of these, a patient suffering under the distressing symptoms of retention of urine, with distention inevitably staring him in the face, must submit for his relief; and it should be the surgeon's object and consideration, not only to pass as an instrument into the bladder, and evacuate its contents; not only to direct his attention to the time being, but to reflect, and select that operation likely to produce the

permanent advantage. And this will entirely depend on the condition of the constricted parts giving rise to the retention. If the stricture have existed for a long time,—if the walls of the urethra have become thickened and cartilaginous, so as permanently to constrict and destroy the function of the canal,—if, indeed, from the circumstances of the case, you believe the stricture likely to persist, although the patient be *pro tempore*, relieved of his retention,—I say, in such an instance, I recommend cutting through the perinæum. If, on the contrary, you have reason to believe, that, by alleviating the present symptoms, you may afterwards be able, by proper medical treatment, to overcome the stricture, then I advise the operation per rectum; so that your conduct must be guided by a consideration of the nature of the case you have to treat; and that operation which is adapted for the one, may, I hold, be highly prejudicial in the other.—For I cannot agree with those surgeons who maintain, that if the source of irritation arising from the efforts at micturation be removed from the stricture, by substituting a new channel for the flow of the urine, that the amelioration of the obstruction will necessarily accrue; but, on the contrary, I am inclined to believe, that the cartilaginous structure, or, indeed, in any kind in which the structure of the urethra is much altered, will, so soon as the flow of urine is made to pass through another course, begin at once to form a permanent obliteration of the canal; as we invariably find that, under all circumstances in which an organ is thrown out of its natural function, that it soon begins to undergo a deteriorating process, which renders it incompetent to be restored to its natural use. This doctrine does not, however, hold with respect to sporadic spasmodic stricture, and therefore the palliative treatment of puncturing the bladder per rectum may, in such case, be most usefully had recourse to.

The operation of paracentesis per rectum is an exceedingly simple one, but on account of its simplicity, it is not, therefore, to be performed carelessly; for, if so, it might be followed by most serious consequences, if not loss of life. The most simple operation in surgery requires the exercise of care and judgment, and is never unattended with some amount of danger. In describing the operation, it will be necessary just to advert to, and bring to your recollection, the anatomical relation of the parts in the pelvic region.

You are fully aware the most important organs contained within the male pelvis are the urinary bladder and rectum, and that these organs in different positions of the body bear different relations to each other. The posterior surface of the bladder is entirely covered by peritoneum, the continuation of the layer descending on the anterior wall of the abdomen, which, being prolonged to the posterior portion of the base or fundus of the bladder, is reflected backwards to the anterior part of the rectum, thus forming a *cul de sac*, known as the recto-vesical pouch. In front of this reflected membrane, the base of the bladder comes closely in contact with the rectum, being separated only by fibro-cellular tissue and recto vesical fascia, a portion of the pelvic fascia which descends into the pelvis to retain its contained organs in place. The bladder here presents a triangular surface corresponding in its situation to the trigon in its interior, the apex of the triangle being directed forwards to the prostate gland, and its sides bounded by the vasa deferentia and vesiculæ seminales. It is in this triangular space that the trocar and canula should be introduced, and where, it will be seen, it can be employed with scarcely any danger of wounding the peritoneum; for, as the bladder becomes distended in retention, it carries with it the peritoneum, thus placing it almost out of the reach of the

instrument, and there will be little fear of injuring the vasa deferentia or vesiculæ seminales, if the point of the trocar be kept in a direction towards the median line. Bearing these considerations in mind, place your patient on a table, with his pelvis well raised before you, and in the same position as that required for the operation of lithotomy; then, introducing the index finger of the left hand into the rectum, pass along it the canula, furnished with a "pilot-plug," until it reach opposite the triangular space of the bladder which I have just described to you: withdrawing the pilot, and depressing the canula, until it assume the direction of a line with the umbilicus, pass in the trocar, and force the two onwards into the bladder. The operation is attended with but little pain, indeed, the chief pain is occasioned in endeavouring to introduce the canula without the "pilot-plug," an addition to the instrument which is of great practical advantage; for, without it, the end of the canula seems to catch in the mucous membrane, and to produce such contraction of the bowels as to prevent its onward progress; with it, however, no such difficulty exists, for its smooth, rounded extremity readily passes within the rectum, and pilots the way for the canula. To insure success in the operation, the chief circumstance to be attended to is, in thrusting the trocar and cannula forwards, to keep the point well elevated or the handle depressed; otherwise it may pass between the bladder and rectum, and, on withdrawing the trocar, the operator may be extremely mortified to find no fluid following it.—*Med. Times, Feb. 15, 1851.*

METHOD OF MAKING THE INCISION FOR THE EXPOSURE OF ARTERIES.

By F. C. Skey, Esq., F.R.S.

I almost invariably adopt an *oblique incision*, and generally at an angle with the artery of 45° , on the following grounds: that in fat subjects it is difficult to ascertain the exact line of the vessel, and that, however true the first incision may be, it does not follow, in the course of a slow and bloody operation, that same line will be preserved; that if, from accidental circumstances, the precise position of the artery be lost, the operator is equally uncertain whether he is dissecting on the inner or on the outer side of the vessel, or upon it; that, by dividing across the direction of the vessel, he acquires a confidence, from the conviction that the artery is really under his knife; and lastly, that he makes an external wound, within which the ligature needle is more readily carried round the artery in a fat subject, in which the vessel lies deep, than in a wound parallel to it. The objection to a directly transverse wound is, that the artery is exposed only in a transverse line, and there is nothing gained, but much may be lost. In the femoral, brachial, radial, and ulnar and posterior tibial, I consider the oblique incision to be an important element of success in finding the artery with facility. Take the example of the posterior tibial artery, how preferable it is to make an external incision over this deeply-seated vessel across the line formed between the muscles that surround it, to the endeavour to hit the exact line, where the deviation of one eighth of an inch would carry the surgeon into the substance of either of two muscles, neither of which he would be able to distinguish from the other! I remember, many years since, to have seen a practised operator totally fail in his attempt to tie the ulnar arter immediately above the wrist, from this difficulty.—*Brit. and For. Med. Chirurg. Review.*

TREATMENT OF PRURITUS OF THE GENITAL ANAL AND
AXILLARY REGIONS.

By Dr. Tournie.

[By the general term pruritus, prurigo, lichen, or eczema are often confounded in the cutaneous affection, the itching being nothing more than a symptom, and after existing without any other characters, without constituting a true disease, this unpleasant affection may, in nervous people, sometimes determine consecutive symptoms of manifest importance. The most successful results obtained by Dr. Tournie have been from the following plan of treatment.]

1. An ointment of calomel, in the proportion of from four to six parts of calomel to thirty of axunge. 2. A powder, composed of four-fifths of starch and one-fifth of camphor, well pulverised and mixed. We may, however, in the ointment, increase the proportion of proto-chloride of mercury; and, in the powder, the dose of camphor, according to the obstinacy of the disease.

The mode of application is as follows:—If the diseased parts are covered with scales or dry crusts, as in eczema, then separation is promoted by cataplasms and emolient baths; having accomplished which, he applies, twice a-day, frictions with the foregoing ointment, and after the frictions, sprinkles the parts with the mixture of starch and camphor.

The ointment alone is inefficacious; and the camphorated starch, without the assistance of the ointment, allays the itch, but does not effect a cure.—Experience has proved this.

The following are the cases of which he has reported the details:—1. Prurigo of the labia majora and vulva—intertrigo. 2. Lichenoid affection of the labia majora—intertrigo. 3. Chronic eczema of the scrotum. 4. Lichen in axillary region. 5. Itching of anus. 6. Ditto, do. Besides these, he notices three other cases of perfect cure by this treatment, two of lichenoid affections of the anus in men, and one of prurigo of the labia majora in a woman. He does not give the details of these last three cases. In one only—namely that of the fourth case—was it necessary to increase, in a notable manner, the doses of the calomel and camphor; in all the other cases, the ordinary formula was sufficient to produce a cure.

When the itching of the anus is caused by the presence of ascarides, the calomel and camphor are less efficacious; but he has recourse in this case to mercurial ointment, and often verified its vermicide effects on this species of worm.

The state of pregnancy seems to neutralize the action of the therapeutic means, the success of which he has recorded above. Thus the itching of the genitals in two pregnant females proved intractable to every kind of treatment. In one only venesection seemed to allay the itchiness a little; but in the second it produced no effect;—in both, the itching disappeared immediately after delivery. In these two cases the itching had commenced during pregnancy; and it existed without giving the vulva any appearance of a lichenoid or pruriginous eruption.

Dr. Maslieurat-Lagènard has published, in the 12th No. of the "Gazette Médicale," for 1848, page 204, a very curious and remarkable account of a general itching supervening, without eruption, in the course of eight pregnancies, in one of his patients. This did not commence till after the sixth month, and no treatment appeared to alleviate the violent itchings, which during the eight pregnancies resulted six times in premature deliveries.

In Dr. T.'s hands the combination of calomel ointment with the powder of camphorated starch, in the treatment of itching of the hemorrhoidal region, has given results which no other treatment has ever obtained in so constant a manner.

Every practitioner who has been consulted for these affections has been obliged to direct himself to formulæ of great variety, before hitting on a successful expedient. In illustration of this, it is sufficient to relate the summary of five observations published by Dr. Ruan, in 'Hufeland's Journal.'

Of these five cases, two were treated without any success by purgatives, diuretics, opium in large doses, Goulard's extract, and solution of borate of soda, intractable to all these means, they were cured by the balsam of copaiba.

In a third case, the copaiba, which had succeeded in the two first, was inefficacious, whilst the borax, which had failed in the others, caused the itching to disappear in this case.

A fourth case resisted the divers means employed for the three first, and gave way to the administration of the subcarbonate of soda in small and repeated doses.

The fifth case resisted every treatment.—*L'Union Medicale*.—*Monthly Journal of Science*, April 1851.

MIDWIFERY.

PECULIAR FORM OF THROMBUS OCCURRING DURING LABOUR.

By William F. Montgomery, A. M., M. D., Professor of Midwifery, &c. to the King and Queen's College of Physicians in Ireland.

There are two situations in which the formation of a thrombus or bloody tumour during natural labour is a matter of common observation, namely, on the head of the child, and at the vulva of the woman; but I think I have fully satisfied myself that there is a third variety of it to be met with in practice, invested with no little interest, and involving considerations of high practical importance, where an effusion of blood takes place in the tissue of the uterus, near the os uteri, and more especially in the anterior lip of that organ.

On the first variety, or that which forms on the head of the child, I do not propose at present to make any observations. With regard to the second, it does not appear to have been recognized, or at least was not described by any English writer,* until Dr. McBride of this city published an account of two cases of it in 1776. Nor do I recollect to have met with an instance of it in my own practice for several years, until 1849, when I met with two within six weeks, the first on the 23rd August, and the second on the 4th October.

The former was in a lady with her first child; her labour was short and natural, with but little effort or straining, nor was I aware of the occurrence of the tumour until after delivery, when I found it on the edge of the left labium, but ruptured, and its contents partially discharged. The swelling subsided within a few days, and no subsequent inconvenience was experienced from it. The lady, who was not young, recovered very favourably.

* The following passage from Veslingius, in 1647, appears to describe this accident very exactly:—"Alias jam bis observassem ab effuso intratumas vaginæ sanguine in partu difficili, pudendi labium ingenti tumore distensum fuisse, quo aperto, sanguineque atro paulatim evacuato, mulieres evasere."

The second case occurred in a lady who had three or four premature children, and now for the first time, under my care, went to the full period of gestation. I was sent for at six a. m., and her labour proceeded favourably during the next two hours; and at eight o'clock I thought the child's head would be expelled in a few minutes. I now observed however, that there existed a great fulness and thickness of the perineum and external parts, especially towards the left labium, which began to swell perceptibly, and, as it swelled, assumed a dark purple or blackish colour. It gradually became enormously enlarged, and the advance of the head was completely prevented, until at length, a little after nine o'clock, the swelling burst on the inside, under the pressure of a pain, and a considerable quantity, not less than twelve ounces, of coagulated and fluid blood escaped. The pains almost immediately became effective, and the head advanced easily. The child, a girl, was born at half-past nine o'clock, and all went on well; no hæmorrhage of any consequence took place. Nothing was done except laying on a pledget of lint, wet with solution of alum, and making firm pressure with a napkin fastened to the binder. The sloughs came away on the fourth and fifth days, without hæmorrhage; the swelling of the labium and perineum gradually disappeared, and a clean open sore, of a healthy aspect, remained, which gradually healed, and was completely well at the end of four weeks. The rupture of the vessel in this case took place in the perineum, and thence the effused blood percolated through the areolar tissue into the labium.

Two things particularly struck me when this occurrence took place:— 1st. The immediate effect produced on the uterine contractions, which were at once impaired, both in frequency and power; and 2nd. The complete resistance which the tumour offered to the advance of the head.

It is a very rare occurrence in private practice. Several friends to whom I have spoken say they have never met with it among their patients. McBride witnessed only two cases, and Denman only three, most of which occurred, or were first noticed after the labour was over. Davis mentions two or three. Dr. Clarke, who has recorded the results of 3878 deliveries in private practice, does not mention any instance of it. In Dr. Collins' record, too, of 16,414 cases of delivery, there is not, I believe, any instance mentioned of this accident. No unpleasant consequences attended the cases which occurred to me. Denman says:—"But I believe it is void of danger, not having seen or heard of any dangerous consequence from it, or ever found anything necessary to be done, but to wrap the tumefied part in a flannel wrung out of warm water and vinegar, and on the discharge of the coagula, which should not be hastened, to dress the little sore with soft liniment." Davis says, that "the subsequent hæmorrhage was so moderate as to excite no alarm," and the lady's recovery was speedy and uninterrupted. This is so far satisfactory, but all cases of this kind have not been so exempt from trouble or danger; very free and persistent hæmorrhage having been occasionally found to cause the practitioner much anxiety; and in not a few instances the result has been fatal. In a case of thrombus, which is reported in the *Revue Médico-Chirurgicale*, Mars, 1850, a thrombus formed during labour, and the attendant, a "sage femme," mistaking it for a bag of membranes protruded, unfortunately succeeded, under that impression, in rupturing it, by which an opening was made, from which the blood poured "like water from a sponge." The edges of the laceration were pinched up, and caught between a split stick, which completely arrested the hæmorrhage. The woman, luckily, was not delirious for three days afterwards; no hæmorrhage returned, and she did well.

In a case recorded by M. Stendel, the tumour burst during labour, six or seven pounds of blood were quickly poured out, and the patient expired. Mr. Crosse of Norwich, says, that in a case which he saw during a protracted labour, rupture of the left labium took place, to the extent of two or three inches, followed by the great loss of blood, and the patient died undelivered."

Within the last year I saw a case in which a thrombus, about as large as a good-sized red plum, formed in the left labium, in the seventh month of pregnancy, and gave the lady *intolerable annoyance*, so that on the 18th of June I made a very small puncture into it, and discharged its contents; but on the 13th of July I was again sent for, and found her in a similar state of distress, from pain caused by a feeling of weight and tension, of which she complained most grievously. She described the sensation she experienced as resembling that produced by the pressure of the child's head when distending the perineum. I found the tumour rather larger than before, and again punctured it, after which the lady suffered no further annoyance. It did not fill again, and on the 24th of August she was safely delivered of a full-grown child. There was no appearance to mark the situation where the tumour had been; nor was there any attempt at its reproduction subsequently.

So far, all the cases alluded to have been of effusion into the external labia pudendi, but I think I have learned from sufficient observation that these are not the only situations in which thrombus occurs during, or in consequence of labour, but that quite a similar accident, though differing much in degree, happens not unfrequently in the tissue of the cervix uteri, and especially in the substance of the anterior lip of the os, giving rise to a condition greatly resembling in some of its characters that which is generally spoken of as œdema of the part, from which, however, it is altogether a different affection. The first time that this matter attracted my attention in practice was in the following case:—

Mr. S. requested my attendance on his wife, on 11th March, 1830, at ten p. m., she being then in labour. The night before she had diarrhœa and some discharge of blood from the vagina; she had six children by a former marriage, and her last was now five years old. I found her with labour established, and with some hæmorrhage, but not much. One part of the lower portion of the cervix, towards the right side, felt very prominent, thickened and spongy, so as most strikingly to resemble a portion of the placenta; and it appeared to me that it was from this part the hæmorrhage was proceeding. The head presented naturally; the labour progressed favourably, and as the descending head came to press more forcibly into the os uteri and on the spongy tumour, its contents were discharged; the hæmorrhage ceased, and did not again return, and at half-past twelve o'clock a male child was born, healthy and vigorous. The placenta came away in about ten minutes. There was no further hæmorrhage or other unfavourable symptom, and the lady recovered well. Mr. S. was a medical man, and, seeing the hæmorrhage, he became anxious, and made an examination, when he was greatly alarmed at feeling, as he thought, the placenta at the os uteri, and immediately sent for me.

After hearing his report, I examined the patient, and at the first moment thought his account was only too correct; but a little further examination easily satisfied me of the true state of the case, because it was clearly evident that the tumour resembling the placenta was not merely applied to the inner surface of the uterus, but was identified with the substance of the organ, so that it was impossible to insinuate the point of the finger between them, while it could be readily passed behind or partially around. To those who may not have met with

this state of the parts, I would beg leave to say, that the resemblance of this tumour, when in the form in which it occurred in this case, to the placental structure, is sometimes so close as very readily to deceive an incautious examiner. The circumstances under which we meet with this condition in practice are generally as follows:—About the time when the os uteri is more than half dilated, especially if the waters have already been evacuated, we find that the anterior lip gets gradually, but pretty quickly, fuller, thicker, and more prominent, and, instead of yielding readily before the pressure of the head, and slipping away upwards, it continues to descend as the head is forced downwards; and if we try with the point of the finger to push it past the head, and out of the way, we do not succeed; an unexpected delay now takes place, and a labour which we have every reason to hope would go on quickly, and be completed within a short time, is protracted for perhaps two or three hours, or even more, and the patient's pain increased both in character and duration. At length the swollen labium diminishes, suddenly recedes, and disappears, and very often, at the same moment, some blood is discharged, generally of a deep rich colour, and now the retarded head descends more quickly.

I do not wish to be understood to say that the swollen lip in such cases always bursts and discharges its contents, for such is not the fact, but that this is frequently the result I feel quite assured. I had recently (10th October, 1850) an opportunity of seeing this condition of the anterior lip of the os uteri during labour. The lady had four children, and her labour was in every respect satisfactory. Shortly after the discharge of the liquor amnii the pains became urgent, and the anterior lip of the os began to swell, and immediately, as in all other instances of thrombus that I have met with, the propulsive power of the pains was at once impaired, although they continued strong, and returned at short intervals; but still the swollen lip resisted the passage of the head, or at least did not yield, and continued to be pushed down with it, until with each pain it protruded under the arch of the pubis, *of a deep purple colour, like that of black currant jelly*; suddenly it disappeared, and one or two ounces of deep, rich coloured blood flowed away; the pains became in a few minutes much more efficient, and the labour was soon happily completed. The lady recovered well. Is this accident an occurrence of little moment beyond the temporary delay and increased suffering which it causes? or is it one that may have dangerous results? are questions of no inconsiderable importance.

Were I to judge from my own experience alone, I should be bound to say, that I had found both forms of thrombus, the external and the internal, free from *fatal*, though liable to produce *serious* consequences; but the experience and observations of others have shown that the bursting of bloody tumours, wherever situated, has been often a source not alone of great danger, but sometimes even of death. I have already alluded to the occasionally pernicious nature of the hæmorrhage accompanying the the thrombus of the external labium, and I recently heard the particulars of a case, and examined the uterus after death, in which, I think, death resulted from a thrombus in the substance of the cervix uteri.

The case to which I allude was brought under the notice of the Obstetrical Society by Dr. George Johnson. The woman had an apparently easy and safe labour, with a breech presentation, and for three or four days afterwards went on perfectly well; but on the fifth day, greatly to the surprise of those who saw the patient, and found the uterus well and firmly contracted, a profuse

hæmorrhage took place suddenly, and the patient sank within an hour and a half. After death it was ascertained that there was in the substance of the cervix uteri, close to the os, at the left side, a distinct cavity, capable of containing a small orange, into which opened the mouths of several blood-vessels.

After a careful inspection of the parts, I felt no doubt that this was an instance of the accident I have been describing; that in fact a thrombus had formed, the cavity of which was filled by a coagulum; that the thin stratum of uterine structure, or perhaps only mucous membrane and areolar tissue, interposed between the cavity of the thrombus and that of the uterus, was gradually attenuated, and at length burst, or sloughed away, allowing, of course, the coagulum to escape, and the open bloodvessels suddenly to pour out a torrent of blood, under the overwhelming influence of which life was extinguished within the awfully brief space of an hour and a half. It is to be observed, that in the case of thrombus of the external labium, related at the commencement of these observations, the slough separated on the fourth and fifth days; and here, in the case now before us; the fatal gush of blood took place just at the same interval after labour. It is but right to say of such a case, that it exhibits one of those unforeseen but perilous accidents against which no human care or caution could guard, or human skill be always available to save the patient's life.

In the month of July of last year, I saw a case which I have great reason to believe was of the kind now under consideration.

A lady affected with varicose veins, which extended all up the lower extremity, and could be traced into the vagina, was delivered, after a natural and favourable labour, at midnight; but shortly afterwards a fearful rush of blood took place very unexpectedly, for *the uterus was well and firmly contracted*. So great was the hæmorrhage, that complete prostration was immediately produced, and when I saw her, she was cold and pulseless, nor had she any return of pulsation in the radial artery for six hours and a half from the time of the sudden hæmorrhage, and during a part of that time the action of the heart could neither be felt nor heard. All this time the uterus remained perfectly contracted, but in the situation of the anterior lip its substance felt as if broken up into a soft pulp, the consequence, as I believe, of the formation and rupture of a bloody tumour. To our great joy, she ultimately rallied under the treatment adopted, and completely recovered.

I believe the formation of a thrombus at or near the os uteri, its rupture, and consequently open state of some vessel or vessels in the cavity thus formed, is very often the real cause of those hæmorrhages after the birth of the child and expulsion of the placenta, where the uterus is found to be well and firmly contracted; and it is to be recollected, that just where the thrombus forms is precisely the situation in which the contractile power of the organ is most feeble; and should it happen towards either side, it is then close upon the very part where the bloodvessels send in the largest supply to the uterus. And I would say, that while we should neglect no general or subsidiary means to check the hæmorrhage, or secure the patient from its dangerous effects, our *greatest security*, under such circumstances, will be obtained by plugging the vagina, while, at the same time, we take the necessary precautions against allowing the uterus to relax and become distended with blood.

If the occurrence of this affection has been described or noticed by any former writer, I am not aware of it; but in the writings of two of our most eminent authorities in practical midwifery, I find in each a passage distinctly

bearing upon the view I have here to put forth, and, as far as they go, tending to confirm its truth. At p. 271 of his Introduction to Midwifery (5th edit.), the admirable Denman says:—The uncoloured mucous discharge from the vagina, which pretty generally occurs before labour, on its accession is usually tinged with blood, or a small quantity of pure blood is discharged. This sanguineous discharge, which varies in quantity and appearance in different women, is popularly called a *Show*; and it happens more particularly at two periods of a labour,—when the os uteri *begins* to dilate and when it is finally dilated. In the first instance, it is probably occasioned by the separation of a few of those vessels by which the membrane which connects the ovum to the uterus was originally bound; and in the second case, by the effusion of some blood before *extracted in the substance of the os uteri; for this part, in some cases, acquires an uncommon thickness from that cause, independent of any œdematous or inflammatory tumefaction.*" And Dr. Burns observes, at p. 460 of his Principles of Midwifery (9th edit.):—"In tedious labour the os uteri, and even the cervix, sometimes becomes swelled, as if blood were effused into the substance." Where such a condition is recognized during labour, we shall show our wisdom by interfering as little as possible with it; by abstaining from attempts to get the gorged lip of the os over or past the head; and when the head does descend, and is expelled, we should be more than usually slow to withdraw the body of the child, more than usually careful to secure complete uterine contraction, and more than usually watchful of the state of our patient after all is over; although we must, at the same time, acknowledge the painful truth, that, with all the care and caution that the most anxious circum-spection can prompt to the adoption of, an accident of this kind may take place under circumstances of which we have no intimation, until alarmed by the urgent danger of our patient, or struck aghast by her unexpected and untimely death.

[Dr. Montgomery would feel obliged by the communication of any fact bearing on the subject of this paper, whether confirmatory or otherwise.]—*The Dublin Medical News.*

COMPRESSION OF THE AORTA IN UTERINE HÆMORRHAGE

The French obstetricians put great faith in the compression of the aorta in uterine hæmorrhage. M. Vial advises, however, not only to compress the aorta whilst the blood is being lost, but to continue the pressure for several hours, even when the hæmorrhage has ceased, with the view of preventing syncope; the latter being often mortal, and always following abundant uterine hæmorrhage. M. Vial thus endeavours to keep the blood in the upper part of the trunk, and to forestall its reaching the parts beneath, as well as the lower extremities. If this pressure *can be borne* for the time mentioned, it should certainly be tried in desperate cases.

M. Chailly, candidate for a seat in the Academy of Medicine of Paris, in the obstetric section, lately read a memoir on the above-mentioned hæmostatic measure. The author mentions eighteen cases of hæmorrhage after delivery: in these, pressure on the aorta arrested the blood seventeen times, for a period of a varying duration, which, however, allowed in each case other means, as ergot of rye, ice, &c. to be used, and to act beneficially. The pressure failed in an anæmic patient, though she lost but very little blood after the application of pressure.—*The Philadelphia Medical News.*

MEDICAL JURISPRUDENCE.

ABSTRACT of Mr. A. Taylor's paper, in *Guy's Hospital Reports*; Vol. 7, part 1.
Continued from No. 6, page 272.

Case 19.—This case is so very curious and important, that we copy it at full length.

“Suspected Irritant Poisoning—Death from Natural Causes—Ammonio-phosphate of Magnesia found in the stomach, and Antimony in the Tissues.

On the 25th of May, 1850, I was consulted on the following case:

A youth, æt. 16, had been suffering for many months from a tumour in the cheek, for which he applied to a surgeon, who punctured it from the inside, and let out a spoonful of glairy fluid. At this time, the boy was considered by his friends and the surgeon who operated, to be in a good state of health. The opening was made into the tumour on the morning of Friday, May 10th; and on the following Monday, May 13th, the boy walked a distance of several miles, and was again seen by the surgeon. He was then going on well. Some aperient pills were prescribed for him, and he was ordered to attend again on the Wednesday morning, the 15th. He accordingly went on that day at 10 o'clock: he was then quite well, and he left the surgery to walk home, a distance of three miles; but before he got out of the town, he was taken very sick, and was obliged to go into a cottage, where he complained of excessive thirst, and drank large quantities of water. He was conveyed home in a cart, and the surgeon, who had attended him in his illness, was sent for by his friends. He was then rapidly sinking; and he died on the Thursday morning, May 16th, the thirst continuing until the last.

A post-mortem examination was made by another medical man, by order of the coroner; and although this took place eight days after death, the body was still very fresh. The stomach presented an unusual appearance, having its mucous membrane covered with a fine white crystalline powder. Of the state of the viscera, with the exception of the portions sent to me, I have no information. Considering the suddenness of the death, and the powder found in the stomach, a suspicion arose in the neighbourhood that the youth had died from improper treatment; and this suspicion was supposed to be strengthened by the fact, that the surgeon, who attended him, had used some injection, in the treatment of the tumour, on the morning on which the boy was taken ill.

These particulars were communicated to me only after the examination and analysis had been made, and the report sent in. Certain portions of the viscera were forwarded to me, with the general inquiry, whether they contained any poison; and if so, whether this was in sufficient quantity to account for the sudden death of the deceased.

APPEARANCES.—*The Stomach.* This organ was very rugose, and presented a general diffused redness over the whole of the lining membrane, but especially at the two ends. This redness had not the character of inflammation during life, but it might have arisen from causes operating after death, as the cavity of the organ had been laid open. The whole surface was covered with a fine white powder, evidently crystalline, which, when examined by a lens, was mixed with some particles of a yellow-coloured substance. This crystalline powder closely adhered to the mucous membrane, but it was readily separated by agitation in distilled water. The quantity thus spread over the whole stomach was not less than two grains.

The crystalline powder, which presented very much the appearance of arsenic, was procured in sufficient quantity for the determination of its chemical characters. The crystals were transparent, of a flattened prismatic shape, glittering strongly in the sunlight, and rapidly subsiding in cold water, without dissolving in it. They were separated, and dried on bibulous paper. When heated, they became white and perfectly opaque, giving off only a small quantity of vapour slightly ammoniacal. They were not volatile, like arsenic or corrosive sublimate, nor could any metal be obtained from them by the use of flux. They were insoluble in water, hot or cold; but in hot water they lost their transparency. When powdered and digested with diluted nitric acid they immediately dissolved without effervescence. In this solution, phosphoric acid and magnesia were found, but no lime. It was therefore obvious, that the crystals were the compound phosphate of ammonia and magnesia. The yellow particles intermixed with them were insoluble in ammonia, and became charred by heat: they consisted of organic matter.

The whole of the stomach was cut up, and the aqueous and acid solutions of the tissues of the organ examined for arsenic, corrosive sublimate, and other mineral poisons, by Reinsch's process, as well as by other chemical processes. The copper-gauge, employed in Reinsch's process, acquired, in about half an hour, a faint stain of a violet hue, unlike arsenic or mercury in appearance. When the copper was washed and dried, the deposit had all the appearance which I had seen the metal assume when a minute trace of antimony happened to be present. A slight milky sublimate was obtained by heat, entirely free from any crystalline appearance, when examined by a powerful lens. This sublimate acquired a reddish-brown tinge when exposed to the action of sulphuretted hydrogen and hydro-sulphuret of ammonia. The colour thus produced was not discharged by ammonia. The sublimate was soluble in the strong mineral acids. These facts, while they entirely removed the suspicion of the presence of arsenic or mercury in the tissues, rendered it highly probable that antimony in some form was present.

Upon writing to inquire, whether any antimonial preparation had been given to the boy medicinally, I was informed that the night before he died, a powder containing three grains of *pulvis antimonialis*, had been given him; but the vomiting, and other supposed symptoms of poisoning, had manifested themselves several times before the powder was taken;

A portion of the drainings of the bladder, in which the stomach had been placed, was separately examined for mineral poison, but none was present.

The small intestines, liver, spleen and pancreas presented nothing abnormal. They were examined with similar negative results.

The subjoined conclusions were drawn from this examination and analysis.

1. That the stomach and intestines of the deceased contained no mineral poison.
2. That the white crystalline powder found in the stomach, and which had very much the appearance of arsenic, was a perfectly innocent salt, deposited, probably, as a result of post mortem changes, from the fluid secretions of the stomach.
3. That a small portion of antimony existed in the stomach and intestines of the deceased.
4. That there was no marked or unnatural appearance in the viscera, examined by me, which could account for death.

REMARKS.—This case seriously implicated the reputation of a provincial practitioner, of good professional qualifications and standing; and the result was so far satisfactory that, without any knowledge of the facts, the conclusions of the report completely exculpated him from a suspicion which had arisen, that he had employed some poisonous liquid for an injection, on the morning of the boy's illness, and had thus caused his death. So strong was this feeling, that a proposition was made that the body should be disinterred and the tumour itself examined, in order to determine whether any mineral poison was present in it. It was explained, however, that as the boy lived about twenty-four hours after the use of the injection, the poisonous ingredients, if any, would have had sufficient time to be diffused by absorption, and thus would have been detected in the tissues. The detection of only a minute quantity of antimony, unmixed with any arsenic, proved with what delicacy the mineral substance might be thus discovered; and it was quite conclusive that no arsenic was present, while, if arsenic had been used in the injection, it could only have operated fatally by absorption. Again, a quantity of arsenic that would thus kill a youth of the age of sixteen years, in twenty four hours, would not become entirely eliminated from the system within that period of time.

There were, however, certainly some very suspicious incidents in the case: the sudden illness and death, from a state of comparatively good health. The vomiting and thirst were also symptoms to attract attention, but it does not appear that there was diarrhœa; and other special indications of the effects of arsenic were wanting. Again, the appearances of the viscera were not such as are commonly found in arsenical poisoning. The presence of a white crystalline powder in the stomach, until a chemical analysis had demonstrated its real nature, was calculated to strengthen the impression that the boy had swallowed arsenic. The analysis proved, however, that the stomach contained none of the poison, and, even had any portion of the supposed arsenical injection been swallowed, a trace might have been still found in the contents, or, if not in the contents, in the tissues as a result of absorption.

Supposing that the body had been disinterred, the tumour examined, and a small portion of arsenic found therein, it would still have been difficult to have drawn the conclusion, that death had been caused by this poison, in face of the adverse facts and reasons above given. The quantity thus found might have been really too small to account for death.

The nature of the injection used did not transpire; but I believe it was alleged, that it contained no arsenic, nor any noxious ingredient. At the inquest the jury felt satisfied that the boy had not died from poison, and returned a verdict of death from the "Visitation of God."

One fact in the chemical examination requires a brief notice. Whenever the crystallized ammonio-phosphate of magnesia found in the stomach: I have repeatedly found it in the dead stomach and intestines, after an interval of three, four, and six months; and my friend, Dr. Geoghegan, of Dublin, enumerates this as one of the appearances which he has met with, and one very liable to give rise to a wrong suspicion of the presence of arsenic in the body. It appears to me probable, that the crystals are slowly eliminated from the fluids of the stomach becoming neutralised by the ammonia evolved during the decomposition of the body. The perfect form, and glassy appearance of the crystals, show that they must be produced very slowly. I know of no other cause to which their presence in the dead stomach can be assigned. The ob-

feature in which this case differs from others, is that the crystalline deposit was found so recently after death; a period of eight days only having elapsed."

20.—Case of "Suspected Irritant Poisoning. Death from Peritonitis arising from perforation of the stomach."

The death was preceded by many suspicious circumstances, supposed to be indications of poisoning from some irritant matter. "She complained of severe pain in the abdomen, especially in the region of the stomach, which she described as a burning heat. There was great tenderness over the whole cavity"—free vomiting, and the bowels much relaxed; much thirst. Next day she was worse. Complained of intense pain in the abdomen, with vomiting and purging, thirst and a sense of burning heat in the throat. No medicines had been prescribed.

Inspection.—There were vomica in the lungs, with pleural adhesions; the heart was large and fatty. On opening the abdomen, the peritonæum was very red throughout, and as if wanting at the upper part; mesentery inflamed; adhesive bands existed between the intestines, which were very red on the outside. Stomach also externally of a dark-red colour; when opened, patches of redness throughout; stomach ulcerated on the mucous surface; the intestines were stained by the contents of the gall-bladder, which was sound. The liver was much enlarged.

The Stomach.—On laying the stomach open, a general inflammatory redness was observed about the smaller curvature. The mucous membrane was of a rosy tint, and very rugose. A dark-coloured mucus was spread over the surface in patches. The mucous membrane of the stomach was ulcerated, and the coats were much thinned towards the greater end. Immediately below the cardiac opening, and on the anterior surface of the stomach, there was an aperture of about an inch in diameter, of an oval shape. The stomach was much thinned and ulcerated around this opening, and the edges were of a dark colour. The mucous fluid about the orifice was acid, but not more than the contents of the stomach are commonly found to be. There were small lumps of fat on the surface of the stomach, but no signs of a gritty powder. There was no particular odour, except that of decomposing animal matter.

Analysis.—The coats of the stomach, including the central and inflamed portions, were examined for arsenic and other mineral poisons, but no poison of any kind was present.

Contents of the Stomach.—These consisted of a brown-coloured fluid like coffee-grounds, measuring ten drachms: there was no appearance of white sediment, on emptying the bottle containing the liquid; and, on pouring it from the measure, there was no gritty or mineral matter. The liquid was decidedly acid in re-action.

Three separate analyses of the contents of the stomach were made, but no trace of arsenic, or any mineral poison existed in them.

The Small Intestines.—On the outside these were much inflamed. Patches of ulceration were found on the mucous membrane, but this was not so inflamed as the peritoneal coat. There were some green patches upon them externally, extending through the coats. These were owing to decomposition and an altered state of blood, arising from post-mortem changes. A chemical analysis proved that they were not due to any mineral matter. No poison was found in the small intestines, or their contents.

CONCLUSIONS.—1. The result of this investigation is, that no poison of any kind was present in the stomach, intestines, or their contents.

2. The *post-mortem appearances* including—1, an ulcerated state of the mucous membrane of the stomach; 2, a large aperture produced by ulceration and thinning of the coats at the cardiac end of the stomach; 3, extensive peritoneal inflammation with adhesions of the intestines, and the fact that the bowels were less inflamed on the inside than on the outside—are circumstances which show that the cause of death was peritonitis from effusion of the contents of the stomach.

3. The perforation of the stomach was caused by *disease and not by arsenic* or any *irritant poison*, because no trace of arsenic or irritant poison existed in the substance of the stomach or in its contents.

4. The symptoms, although in some respects resembling those of irritant poison, are, in my judgment, fully explained by the perforation of the stomach and the consequent peritonitis."

21. Death from Distension of the stomach.

The subject, aged 40, ate a full supper at 10 p. m., and went to bed at 11. At 4 a. m., he was snoring loudly, was quite senseless, and died immediately afterwards. The body was inspected fifty-five hours afterwards. "The general appearance of the viscera was healthy; the heart collapsed, but without any sign of disease; the brain not remarkably congested; there was no extravasation of blood; the stomach was completely filled with food, only partially digested.

Poisoning was suspected, but this was completely negated by the circumstances. No narcotic, capable of having the symptoms delayed for a period of nearly two hours, and of destroying life in six hours, could have been taken at supper, and nothing was taken subsequently. "The only condition to which death could with probability be referred, was the highly distended state of the stomach. Those who have died from this cause have commonly been found dead in bed. The recumbent posture, with a distended state of the stomach, may tend to induce an apoplectic condition of the brain, and thus destroy life."

22.—A case of death, supposed to arise from violence, but proved to have depended on natural causes.

The subject was a married woman, of dissipated profligate habits. Quarrelling, and cries of murder were said to have been heard in the night. In the morning she was found dead. On the inquest it was proved she had been very drunk. About one a. m., she complained of feeling cold. About four a. m. her husband got up, and went down stairs. He heard her cry out, "Oh, dear; I do feel bad; I am going to die." She must have expired shortly after, though the precise time is not stated.

There was no external injury, but the face and neck were much congested; the vessels of the arms distended with blood, and frothy blood exuded from the mouth; cadaveric lividity on the back and shoulders. The brain was *greatly* congested; a circular clot of blood at the base, an inch in diameter, and the ventricles filled with coagulated blood. The lungs were emphysematous; heart hypertrophied and full of dark coagulated blood. The viscera of the abdomen were healthy, except the liver, which was in a state of cirrhosis.

Verdict—*Apoplexy* from excessive drinking

23.—Is an instance of death from "Malignant Cholera," taking place immediately after a quarrel in which the man was knocked down, though without much violence. Death took place in *six hours*, without any marks of injury about the person sufficient to account for death in so short a period.