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BACELLI'S SIGN.*

BY DR. PROVOST, OTTAWA.

It is generally easy enough to diagnose a pleuritic effusion. By careful examination, any one can readily detect the presence of such symptoms as bronchophony, bronchial respiration, dull sound on percussion, sometimes total absence of respiratory murmur and bulging of the thorax. But it is more difficult to find out the nature of the fluid contained in the pleural cavity. Still, it matters a great deal that we should be enabled to make a differential diagnosis of pleuritic effusions; we can easily understand what modifications the treatment as well as the prognosis will undergo, whether we have to deal with a serous or a purulent exudation.

A few years ago, the Italian physician, Bacelli, apprised the medical world of a new sign he had discovered, enabling us to affirm the purulent nature of a pleuritic exudation. All granted a hearty welcome to the good news, and "*pectoriloque aphone*" soon ranked amongst the classical symptoms of empyema.

But what is this Sign of Bacelli?

It is a transmission of the whispered voice through the chest in pleuritic effusion that the Roman professor Bacelli has termed *pectoriloque aphone*.

According to this physician, a pleuritic effu-

sion being given, *pectoriloque aphone* should always be heard, if the *fluid is serous*. On the other hand, should the fluid be at the outset, or become later purulent, then the *pectoriloque aphone* should be absent. In the first case, the phenomenon is audible, owing to the homogeneity and thinness of the fluid through which the voice waves are easily propagated, and in the latter case, the fluid being excessively heterogeneous, and containing leucocytes in abundance, besides layers of membrane, flocculi and blood-discs, the whispered sonorous waves can no longer be heard.

When once I became aware of the facts brought out by Bacelli, I naturally made up my mind to verify personally their accuracy, and I must say that in every case indeed I could easily ascertain the presence of Bacelli's sign in patients suffering from pleuritic effusions. Always the whispered voice could be heard with the greatest distinctness.

But, one day I was called to attend S. L., aged 40 years, who had been complaining for two or three weeks with a stitch in the side, dry cough, and dyspnoea. I carefully examined the chest, and at once found, on the right side, a well pronounced bulging of the thorax with dullness on the percussion, "*tangam percum femoris*." No doubt there was considerable effusion in the pleura. I listened to his respiration; nothing to be heard! complete absence of respiratory murmur. I ordered him to whisper; silence all over! Consequently, absence of Bacelli's sign, no *pectoriloque aphone*. Was

* (Pectoriloque Aphone as a Diagnostic Sign in Pleural Effusion.)
Read before the Rideau and Bathurst Medical Association.

I, then, in presence of a purulent effusion? But there was hardly any elevation of temperature; the general state, in spite of the dyspnoea, was indeed satisfactory. There was no œdema of the thoracic walls. I tapped the chest with the aspirator and withdrew 54 ounces of *serosity*! pure serosity, without a single leucocyte on microscopical examination.

Therefore, M. Bacelli, there are cases of pleuritic effusion where pectoriloque aphone is not heard, and still the fluid is serous, not purulent! Consequently, the absence of your sign, a pleuritic effusion being given, is not sufficient to make us conclude that there is pus in the chest!

However, I paid again more careful attention afterwards, and I must say that pretty often I observed large *serous* effusions, without nevertheless perceiving the phenomenon of pectoriloque aphone. But what I particularly looked for was a *purulent effusion*, with co-existence of Bacelli's sign. Fortunately for our patients, empyema is not of a very frequent occurrence. Still, I met successively with two cases, and with regard to these two patients the Roman professor was right; it was utterly impossible to hear the whispered voice through the chest.

About the beginning of May, 1888, I was called to attend B—, aged 11 years. She had been sick for five weeks, and was complaining of a pretty severe stitch on the left side. The cough, at first dry and unfrequent, soon became very troublesome. Lateral decubitus was impossible; when lying on the right side she at once would be threatened with suffocation, and the left lateral decubitus used to provoke severe fits of coughing. The facies was pale, but dyspnoea could hardly be detected unless the little patient would attempt to walk. I remarked at the precordial region a considerable bulging, with absolute dullness on percussion, and total absence of vocal fremitus. At the apex, percussion showed a tympanitic resonance and also the finest cracked pot sound I ever heard in my life. This phenomenon, gentlemen, is very rare in pleurisy; it is generally met with on a level with pulmonary cavities in consumption. Behind there was also dullness on percussion in the inferior two-thirds of the chest, and auscultation revealed

the existence of bronchophony and also of *pectoriloque aphone*! The heart was displaced to the right of the sternum and at the anterior part of the chest, we could hear equally well the bronchophony and pectoriloque aphone. A few days later œdema of the chest-walls appeared in front, the temperature evidently rose, there was pus in the pleura, and still the whispered voice. Bacelli's pectoriloque aphone could very plainly be heard, especially at the posterior part of the chest. I then at the time pointed out all these physical symptoms to Mr. Lambert, a young student who was accompanying me, and told him that, in spite of the presence of Bacelli's sign and contrarily to this author's assertion, we would certainly find pus in the pleural cavity. The operation, which I performed forthwith, proved my assertion to be correct.

Therefore, I think I was right to conclude that if, on one hand, pectoriloque aphone was sometimes wanting in serous effusions, contrary to Bacelli's teachings, it could also occur that this phenomenon would be perceived in purulent effusions. Consequently, Bacelli's sign cannot give but illusive indications as a means of testing the nature and character of pleuritic effusions. Besides, the careful study of the physical conditions which govern the existence of pectoriloque aphone, suffices to indicate the circumstances under which we are justified in expecting the presence of this phenomenon. In fact, I always remarked that the whispered voice was transmitted to the ear that auscultated only in the cases where at the same time there existed bronchial respiration and bronchophony. When these two latter symptoms were wanting, whatever might have been the nature of the effusion, pectoriloque aphone was also absent.

In pleurisy, compression of the pulmonary vesicles by pleural exudation, transmission of vocal sounds by the large bronchial tubes only, here again we find bronchial respiration and bronchophony. But, in the first case, the indurated pulmonary tissue, possessing a better sound-conducting power will transmit the vibrations with greater intensity than in pleurisy with effusion, in which the conditions of propagation of the sound are less favorable. The bronchial respiration and bronchophony in pneumonia have a brazen, harsh character, the sounds seem as if they were

produced immediately under the ear, whereas, in pleurisy, they are soft, muffled and more distant; we hear a respiratory sound of low pitch, although tubular in quality, but in both cases it is obvious that the phenomenon is the same, and produced by analagous physical conditions. Bacelli's sign has, with regard to the determination of the physical condition of the lung, exactly the same diagnostic signification as the bronchophony and the bronchial respiratory murmur, and in all instances its occurrence, its distinctness, its temporary disappearance and its re-appearance are dependent on precisely the same circumstances as in the case of bronchial respiration and bronchophony; these three phenomena arise from the same causes and are always found associated. In pleuritic effusion, the respiratory murmur becomes bronchial or tubular, respiratively; loud spoken voice becomes bronchophony, and whispered voice becomes pectoriloque aphone. When one of these symptoms is wanting the two others are absent also; they never exist one without the other. In pneumonia, tubular respiration and bronchophony are rarely wanting; they are also always accompanied by pectoriloque aphone. In pleurisy, all these symptoms are often absent, when and why? One condition which is essential to the development of bronchophony is that the larger bronchi must still be potent to permit the entrance of the waves of the sound; should they, too, be closed by reason of the greatness of the pressure, as for example in superabundant pleuritic effusion, then, nothing is heard; no respiratory murmur, no bronchial respiration, no bronchophony and no pectoriloque aphone, whatever may be the nature and the character of the effusion.

Bacelli's sign is not altogether valueless, and it has already been of great use to me. For instance, in certain cases of light pulmonary hepatization, or scanty pleuritic effusion, it sometimes becomes difficult to ascertain the existence of bronchophony or tubular breathing. Dullness on percussion is not well marked; you order the patient to breath or count loudly; you compare both sides of the chest, there is something suspicious, still you remain undecided. Order then the patient to whisper. The distinction at once becomes evident between the sound side and the suspected one. Pector-

iloque aphone has already indicated the spot where to morrow you will hear bronchophony if the disease progresses. The loud voice could still be propagated to the pulmonary vesicles, which however had become impermeable to whispered voice, the intensity of which, unable to throw in vibration the air as far as the last bronchial ramifications, could, notwithstanding, cause to vibrate the columns of air contained in the large bronchi, meeting, consequently, the physical conditions which preside at the formation of pectoriloque aphone.

Such are, gentlemen, the observations I was anxious to communicate upon the value of Bacelli's sign, accepted, it seems to me, with too great haste, by almost all authors. Dr. Secretan is the only one, to my knowledge, who has criticised the premature assertions of the Italian professor at the annual sitting of the Swiss Medical Society, held at Lausanne on the 20th of October, 1887.

A REPORT OF THREE CASES OF DERMATITIS HERPETIFORMIS.

BY J. E. GRAHAM, M.D.

The profession is much indebted to Dr. Duhring for his careful and exhaustive study of those obscure inflammatory affections of the skin which he has placed under the head of Dermatitis Herpetiformis.

Having had under observation during the past two years some cases illustrating different forms of this affection, I thought their history might prove of some interest to members of this Association. It must be confessed that there are still many questions to be answered as to the position of these diseases in our nomenclature, and any light thrown upon the subject be it ever so little, will be of positive value.

Case 1. J. C., aged 21; occupation, book-keeper, entered the Toronto General Hospital, March, 1887. Patient's previous history good, he having only suffered from the diseases of childhood. The present illness began two years ago when he noticed two small blebs, one at the outer angle of each eye. A number of bullæ afterwards appeared over the face, which varied in size from a pea to a twenty-five-cent piece. They were filled with a yellowish colored serum, and when ruptured would form scabs and scales. These

when they fell off, left a healing surface which was for a long time marked by a brown discoloration. The body was most attacked. The arms and legs escaped.

After three months treatment, he left the hospital (University College, London), where he had been under the care of Dr. Radcliffe Crocker. When he left there were only one or two small bullæ visible, but, after a month's absence, he was obliged to return, with a second attack. During the seizure the legs were particularly affected, and the eruption appeared on the trunk as well. After another three months treatment he again left the hospital.

The following description of his condition when in the University College Hospital is given in Dr. Crocker's article on Hydroa, which appeared in the *British Medical Journal*, May 22, 1886:

"On both fore-arms, on both surfaces, are large bullæ about one inch in diameter, containing sulphure yellow, clear fluid. On the dorsal surface of the hand are numerous small bullæ with limpid fluid. On the arms are many scales, left by the collapse of the bullæ. On the points of the elbows are distinct semi-circular erythematous patches, partly united to one another, and becoming fixed together into an irregular rounded figure. There are many semi-circles up the right arm, and some also on the bend over the left elbow. Over the trunk are many unequal scabbed areas, following the lines of the margin of the thorax, and just above it and coming down on each side, and uniting just above the pubes. There are several brownish-red stains left on each side of the sternum. On the face there are many scales. On the front of the neck and on each cheek evidently collapsed bullæ. On the back there are many semi-circular patches, with a few scabs. Above the nates are some large erythematous patches, with numerous minute vesicles. On the front of each knee are some scabs, a few bullæ, and erythematous patches, likewise on the ankles, and there are some very marked bullæ behind the feet. There is slight glandular swelling in the groin." A month after leaving the University College Hospital an erythematous rash appeared, chiefly over the trunk, which has continued ever since.

In March, 1887, patient entered the Toronto

General Hospital. He had just arrived from England when, shortly after landing at Halifax, he was seized with the third attack or rather exacerbation of the disease.

It was ushered in by slight general malaise, accompanied by feverish symptoms. The eruption appeared generally over the surface of the body. It was made up principally of vesicles and bullæ, which contained yellowish-white serum. The vesicles and bullæ were partly arranged in groups, but often appeared singly. There were also pimples and erythematous patches. The eruption was accompanied by an itching, burning sensation. There was a marked congestion of the base of the vesicles and bullæ. The contents of the bullæ rapidly became purulent, dried in the form of scales, which fell off, leaving a healing surface. There was no ulceration. It required from ten to fourteen days for a bullæ to run its course. They often enlarged after the first appearance and ran together, but no extension took place after the rupture of a bullæ. The severe attack lasted about six weeks, during which time successive crops of bullæ and vesicles made their appearance. The patient was compelled to remain in bed, as it caused him pain and soreness to move about. His general health did not appear to be much affected.

Quinine was given to him in five grain doses, three or four times a day.

After his recovery he remained in the hospital some months, acting as an assistant in the Dispensary. He had two or three slight attacks during that time. His general health was excellent, but he was never entirely free from the eruption. A few bullæ, papules and erythematous patches were always present.

Patient can give no cause for his first attack. He had to work very hard, and his health suffered much in consequence. His family history is good, and he did not at any time suffer from venereal diseases.

This case is a very good example of the multifiform variety of Dermatitis Herpetiformis.

Dr. Crocker, in his article, following the nomenclature of the late Dr. Tilbury Fox, placed this case under the head of Hydroa Herpetiformis. It appears to me, as this is a distinctly inflammatory affection, the term Dermatitis is much more applicable.

Case 2. J. C., aged 24, farmer. Had been a strong healthy man up to the commencement of the present illness. In the month of July, 1883, he noticed an eruption of papules and pustules on the chin. Some ointment was applied, and in two weeks all had disappeared. He remained quite well until July, 1884, when an eruption of papules and pustules appeared on different parts of the body. In two months after the commencement all evidence had disappeared.

During the summer of 1885-6 the same conditions occurred, and passed off in about the same time. However, during the winter of 1886-7 the eruption did not entirely disappear. A few pustules remained on the legs.

In 1887 the disease began earlier, in the early part of May. The eruption spread rapidly over the whole body, and remained during the summer.

He entered the Toronto General Hospital in September. He then presented the following appearance :

The surface of the body was to a great extent covered by papules, pustules, erythematous patches, and patches of brown discoloration. The papules were not very numerous. The pustules varied in size from a pin's head to a ten-cent piece, and were arranged, as a rule, in a distinctly herpetiform manner. Around the chest these groups appeared, to some extent, to exist in rows, following the courses of the intercostal nerves. The eruption was distinctly pustular from the commencement. During his stay in the hospital several careful examinations were made over the whole body, and pus was found in all cases.

These pustules appeared in crops. For perhaps a week there would be no outbreak, during which time a gradual healing up of former pustules would take place. Then an exacerbation would occur, during which a large number of new ones would form. They were usually small at first and would gradually increase in size. They would, in some instances, become confluent, forming larger pustules. Frequently, however, they were large from the first.

No extension took place after rupture, consequently there was not much excoriation.

For a day or two before the eruption patient did not feel well, but there were no signs of

febrile disturbance. He did not feel any discomfort until the pustules ruptured, as they usually did from rubbing of the clothing. After rupture of a pustule a red erythematous halo surrounds it. The sensation then is rather one of soreness than itching or pain. He could not work, as the perspiration and rubbing of the clothing produced slight excoriation. The duration of a pustule varied for nine or ten days. It dried up, a scab formed, which fell off, showing a healing surface. This surface was for some time marked by a brownish discoloration. Patient appeared to be healthy in every other respect. During his stay in the hospital he had several exacerbation, when the whole surface of the body became more or less covered by pustules as shown in photograph.

His treatment consisted of quinine sulph., calc. sulph. cod liver oil, and tonics. He did not appear to be benefitted by any remedy.

July 2, '88. Patient called on me this morning. He informed me that the eruption has continued in all its severity throughout the winter. He has been quite incapacitated for work. The exacerbation took place in the same way as during the summer. He had a severe attack about a week ago. At present there are few fresh pustules. The older ones are undergoing the healing process. There are present over the trunk a few papules and pustules, the latter ranging in size from a pin's head to a five-cent piece.

There are many scabs and erythematous patches, the remains of the eruption which took place last week. There is also present a generally diffused brownish discoloration of the skin, the result of former attacks. A very small portion of the skin exhibits the natural color. The anterior surface of the trunk is not nearly so much affected as the posterior. This has been the case throughout.

Upon the extremities the flexor surfaces of the arms and the outer regions of the thigh are most severely affected. During the last few months the eruption has appeared upon the hands and feet. These parts were never before affected. Patient still feels fairly strong and well, but his general appearance is not so good as when he was in the hospital.

The only cause he can give for the first onset

of the disease is that he became much overheated while working in the harvest-field.

His parents are living and healthy. One brother and one sister dead. The cause of death in both was tuberculosis. At his last visit I put him on large doses of arsenic.

The internal organs appeared to be healthy. Urine was quite free from albumen and sugar.

This is a very good case illustrating the *Dermatitis Herpetiformis Pustulosa*, or the *Impetigo Herpetiformis*, as it has been named by some authors. The herpetiform character was more marked than in the previous case. The disease has so far been gradually becoming worse, notwithstanding treatment.

It differs very much from those cases described by Hebra: (1) This was a male, whereas all Hebra's cases were females, (2) As to the severity of the disease, and (3) As to the mode of extension. In no instance was there any extension of the lesion after the pustules were ruptured. We have not, however, seen the last of this patient, and further development may take place which will render it of quite as formidable a character as that of Hebra's.

Case 3. The following is altogether the most remarkable case of the series, and I hope the Association will pardon the detailed and lengthy description on that account. I was called to see the patient in consultation with Dr. Irving, who resides about one hundred miles distant from Toronto. I saw the patient only on two occasions, but the excellent notes made by Dr. Irving leave nothing to be desired in the way of a clinical history. Mrs. F., aged 23, married. Has had two children. The first was prematurely born, Sept. '86, and the second at full birth, Sept., '87. The second was a strong, healthy child.

Patient's previous history had been fairly good. A somewhat indefinite account was obtained of her having had on several occasions an eruption on the skin of a vesicular or bullous character.

During her second pregnancy she noticed that a thin skin formed on the mucous membrane of the lips and mouth, which exfoliated constantly.

On the next day after her confinement she noticed a spot under the left eye which developed into a bulla, having clean watery contents.

A scab afterwards formed, which came off in a few days. She then noticed over the interior surface of the chest large bullæ, varying in size from a ten to a twenty-five-cent piece. The epidermis was raised and tense, a condition which produced an irritable, itchy sensation. This caused the patient to rupture the bullæ, when a feeling of relief was at once experienced. After the bullæ were ruptured in many cases extension would take place. A circle of vesicles would form around the circumference of the former bullæ. This circle would gradually increase in size until a large patch was formed. In some cases a pustule would form on the site of the old bulla, which would increase in size as above described. In other cases again, the scab would fall off, leaving the healing surface, which would be followed by a brown discoloration. There was very little desquamation at any stage of the disease.

During October and November vesicles and bullæ continued to appear over various parts of the body. Her general health remained good. In December patient made considerable improvement, which she maintained throughout January. She was, however, still troubled with occasional bullæ. In February the disease became more aggravated. Vesicles and bullæ appeared in large numbers on the trunk and extremities. Patient became weak and ill, and was obliged to go to bed. She has not since been able to leave it. During the past three months her condition gradually became worse. Her appetite, however, has continued good, and the various organs have been performing their functions fairly well.

She weaned her baby when it was two months old. Her menses returned in December and continued regularly for three months. They have now ceased. She has not at any time passed an abnormal quantity of urine. It is often highly colored. Her sleep is often disturbed by the sore patches, especially when she moves.

Present condition, May 12, '88. Patient was in bed. She thinks at times she would be strong enough to get up, but when she attempts to rise the sores give her so much pain that she prefers to remain quiet. The skin presents the following condition: On the forehead there are a number of brown spots, varying in size, which

show the position of former bullæ. There are some scabs on the eyebrows. Around the mouth and nose the skin presents a red excoriated appearance, and it bleeds at times. The blood in places has hardened on the surface, presenting thin black crusts. The neck in front is quite excoriated, presenting in places a raw, bleeding surface, and in places this skin is covered by scabs, scales and fresh bullæ. The whole surface presents the appearance of having been scalded by boiling water.

Left arm, near the shoulder, presents large scabs and scales, and lower down it is excoriated. On the left fore-arm are a number of vesicles and bullæ.

The right arm is in a worse condition than the left, the integument around the elbow being quite denuded of epidermis and presenting a raw, bleeding surface.

On the anterior surface of the chest there are vesicles and bullæ, varying in size from a pin's head to a fifty-cent piece. In many of the larger ones the contents have become purulent. There are also excoriated patches, varying in size and shape, and patches of brown discoloration. The latter condition predominates over the anterior surface of the abdomen. There is very little normal skin upon any part of the trunk. Rising up in bed caused the patient much pain, so that we could only obtain an imperfect view of it. It presented a similar appearance to that already described.

The thighs and legs present a similar condition, but the eruption is not so profuse. About a month ago her legs and feet were very much swollen. They are now somewhat better.

The mucous membrane of the mouth presents many raw patches. The tongue is swollen and covered by a greyish-white fur.

The heart and lungs are healthy, so far as could be ascertained. No headache.

Temp. 100, pulse 120, resp. 20.

Patient is very despondent. Frets over her wretched condition, often sobbing an hour at a time.

Externally, carron oil was recommended for the raw patches. Cod liver oil over other parts, and over the arms and legs. Starch powder, which had already been applied, was allowed to remain.

Sulphide of calcium pills 1-10th gr. were

recommended internally. Arsenic had been tried in large doses without any beneficial effect.

The following notes were taken by Dr. Irving:

May 15, 9 a.m. Temp. 99 4-5, pulse 108. The right arm looks much better. The external raw surfaces are drying up. The sore around the eyes is increasing. The sore under the chin is spreading upward. Patient eats well and feels more comfortable than on Saturday.

May 16, Wednesday. Temp. 99, pulse 98. No fresh bullæ since Monday. Some of those seen Monday have ruptured; some have become pustular. All parts improving except the chin. The mouth bleeds a good deal.

Patient states that this occurs about once a week. Ordered alum and borax.

Friday, May 18th. Patient continues to eat and sleep well. Two or three fresh bullæ have appeared on the outer surface of the ankle joint, from the size of a millet seed to that of a small bean. The mouth does not bleed, but looks very sore.

The excoriation of the chin continues to spread upwards. The condition around the eyes is not improved. Patient cannot open them.

Digital examination of the uterus reveals no swelling of cervix or enlargement of body. It is not tender. The vagina is raw, tender, and inflamed. It discharges a purulent fluid.

Saturday, May 19th. Temp. 100 1-5, pulse 108. There is an increase in the number of bullæ on the left foot. Those on the front of the ankle are larger and becoming more pustular. One large fresh bulla has appeared on the right side of the short ribs. The excoriation on the chin and around the mouth is spreading upwards on each side of the nose. The mucous membrane on the inner lid of the alea nasi is covered by a blood scab.

The eyes are surrounded by an entirely red surface, upon which the blood has formed thin black scales.

The lips are covered by scales of congealed blood. Mouth is sore and filled with viscid, dirty greyish mucous. Patient voids urine but once in twenty-four hours, then about 32 ozs. High colored. Spe. gr. 1028. No albumen or sugar. Alkaline reaction. Patient urinates less often on account of the pain connected with movement.

Sunday, May 20, temp. 100, pulse 98. The bulla on right side of the chest has ruptured, leaving a large raw surface about the size of the palm of the hand. It did not become pustular. Suppuration is taking place on inner side of left knee, and a raw surface is forming.

Monday, May 21, 9 a.m., temp. 101, pulse 114. Passed an uncomfortable night. This morning I attended personally to all the dressing. The parts on the outer surface of left knee are free from scabs; they are raw, cracked and bleeding.

The popliteal space presents on both sides raw, bleeding surfaces. On the inner side of the right thigh found a solitary sac about the size of a fifty-cent piece, which when pricked discharged thin pus. Apart from this place the leg is doing well. On the feet in places are seen a few small bullæ circling around a larger one. The whole surface at the back of the hips and in the lumbar region is excoriated and bleeding. Patches exist here and there over the back, varying in size from a fifty cent piece to two or three inches in diameter.

The lower margin of the eruption on the chin is looking better, but it is still spreading upwards over the face.

The anterior surface of the abdomen is now almost covered with brownish patches. The mucous surface of the labia and vagina is in a condition similar to that of the womb, presenting numerous superficial ulcers.

May 22, pulse 118, temp. 101 1-5.

May 23, pulse 112, temp. 100.

May 24, pulse 120, temp. 102. I notice that the patches of epidermis rub off without fluid forming underneath.

May 26, pulse 128, temp. 102 1/2.

May 26, pulse 140, temp. 103 3/4. I made a second visit to-day. Patient presents a very striking appearance. The integument of the face not affected by the disease, was pale and waxlike. The skin of the parts surrounding the eyes, mouth and nose is red and excoriated, presenting in places a bleeding surface and in places it is covered by thin black blood crusts. There is no severe pain, but an uncomfortable sensation in the parts. The conjunctivæ are congested. The tongue presents a swollen, greyish appearance. The covering peels off from the tongue two or

three times a day, leaving a raw, red surface.

The diseased zone about the neck shows signs of healing at its lower margin, but it is still spreading at its upper margin.

The surface of chest, abdomen and legs is in the same condition as described by Dr. Irving.

I noticed that when the skin was apparently not affected, the epidermis could be easily rubbed off with the point of a finger, very much in the same way as off a cadaver which had undergone partial decomposition.

Patient's general condition is much worse than at my last visit. She has had diarrhoea for the past two days, and is much exhausted therefrom.

It might be here remarked that the finger and toe-nails have never been much affected. The same may be said of the scalp.

May 27, temp. 103, pulse 143. The diarrhoea is quite controlled. Lig. Carbonis Detergens, one part, to eight of water, applied this morning. Elixir of Iron, Quinine and Wine given internally.

May 28th, pulse 125, temp. 102. The Lig. Carb. Detergens caused a drying up of the raw surface. Thin scabs form, which crack and bleed. Olive oil and sulphur applied to those parts to which the Lig. Carb. Detergens was not suited. She is not taking nourishment, and there is almost complete suppression of urine. Patient complains of heat and cold alternately. She has not at any time suffered from rigors.

May 29th, pulse 145, temp. 102 1/2. Notice that large patches of epidermis come off without fluid forming underneath.

May 30th, patient commenced to vomit last night. The vomiting continued at intervals through the night.

My 31. The vomiting persisted throughout yesterday and during the past night. Patient died at 6 o'clock this morning.

No post-mortem examination could be obtained.

In this case the following is as clear a description as I can give of the diseased process:

The epidermis became raised in spots which varied in size from a pin's head to a fifty cent piece, and occasionally much larger. The vesicles and bullæ first contained straw-colored serum. Often two or three would run together

so as to form one. After their formation the base became congested. The serous contents would in a day or two degenerate into pus. During this time, however, owing to tension and soreness patient would rupture the vesicles and bullæ, thus obtaining relief.

After rupture, they might take any one of the following courses :

1. A scab would form and afterwards dry up and fall off, leaving a slightly congestive healing surface. The skin gradually returned to the normal condition. A brown discoloration remained for some weeks. There was very little desquamation at any time. It thus differed from Pemphigus Foliaceous.

2. A pustule would form on the site of the old bullæ, and of about the same size, and be filled with pus. At the same time small vesicles or pustules would form around the circumference of the old site, thus producing an extension of the patch. Then from even slight rubbing the epidermal covering might be entirely removed, leaving a raw, bleeding surface.

3. When the first scab was rubbed off, a raw surface might remain, which would extend by the formation of vesicles and pustules as before described.

4. Extension sometimes took place by a simple loosing and elevating of the epidermis. The most striking feature in the pathological process was the peculiar manner in which extension of the patches took place after rupture of the primary bullæ.

No ulceration took place at any time during the disease.

It might be asked, why not call this a case of Pemphigus? It might certainly be placed under that head. The points of difference are, first, the distinct herpetiform arrangement of the vesicles and pustules, and secondly, the peculiar method of extension. This mode of extension was quite similar to that described in the accounts given by Hebra of his cases of Impetigo Herpetiformis. Then there was a large amount of suppuration in the case.

I would rather class it as a case of Dermatitis Herpetiformis, resembling in its course most strongly the Impetigo Herpetiformis of Hebra. Hebra's cases were pustular from the first. This case was serous and then pustular. In Dr. Heitzman's case, on the other hand, the exuda-

tion was first pustular and then became serous. I have been long of opinion that too great importance has been given to the character of the exudation in the classifying of inflammatory skin diseases. We are well aware that in many internal inflammations, pleurisy for instance, in some individuals the exudation is serous, whereas in others it is purulent almost from the commencement. The same may take place in inflammation of the skin.

Because in this last case the exudation was first serous and then purulent, that is not sufficient to separate it from the Impetigo Herpetiformis, which was pustular from the first. It certainly resembles the latter disease in many respects

This change of character of the exudation seems to be a frequent occurrence in Dermatitis Herpetiformis, as is shown in Dr. Duhring's cases.

The severity and fatal character of this last case might be thought sufficient to put it in a separate class. It must be remembered, however, that the patient suffered occasionally for years from a mild vesicular and bullous disease, a circumstance which is of great importance in connection with this question.

Dr. Heitzman, in his report of a very similar case spoke of its relation to Pemphigus.

I was particularly struck in the latter stages in my first case with its resemblance to a fatal case of Pemphigus Foliaceous, of which I read a description before this Association. In both cases there was diarrhoea and vomiting, and the same tendency to hemorrhage. The epidermis appeared in both cases loose and could be easily rubbed off the body. In the case now described there was no excessive exfoliation.

In my opinion, the relationship between these diseases is very clearly shown in Dr. Bronson's classification. Under the head, "Aconthoses Angioticæ," he places :

1. Pemphigus, acute and chronic.
2. Pemphigus Foliaceous.
3. Impetigo Herpetiformis.
4. Herpes Gestationis.
5. Cheiro Pompholyx.

If in the places of the third and fourth had been inserted Dermatitis Herpetiformis, the relationship of Pemphigus with that disease would be more clear.

ETIOLOGY OF PHTHISIS PULMONALIS.

BY PRICE BROWN, M.D., L.R.C.P., TORONTO.

With all our increase in knowledge, aided by the scientific investigations of many of our ablest men, phthisis still annually destroys between three and four millions of our race, being, by all odds, the mightiest sluiceway of human life.

The whole subject being too extensive to be taken up in one paper, I shall confine my remarks to the single branch of etiology. I have taken the title, phthisis pulmonalis, because, in the opinion of some writers, it covers larger ground than pulmonary tuberculosis; and, while it includes the latter, the title, pulmonary tuberculosis, might not include the former. The term is a comprehensive one, signifying a progressive metamorphosis of the lungs, accompanied by a gradual or rapid destruction of the normal tissues and waste of the body. An exact acceptable definition has not yet been found.

Authorities have always differed widely in their views of this disease. Virchow, Niemeyer, Broussais, Andral, Cruveilhier, and others, believed that all cases of phthisis were inflammatory in their origin.

Flint, Wilson, Guilbert, Buchanan, Bowditch, etc., recognized the fact that debilitated conditions of the system, mental depression, climatic influences, dampness of soil, were often the direct causes of the disease; while we are now told that the sole exciting cause of phthisis is believed by the authorities in New York to be the tubercle bacillus; and that this theory is accepted as proven beyond the shadow of a doubt. We have very few dogmas in medicine. Our light comes too slowly—through too many devious pathways to make them sure; and we may well wonder what the enlightened men of fifty years hence, with all their accumulated experience and lore, will think of this dogma of to-day.

Founded upon the clinical experience of many able observers, phthisis pulmonalis may be divided into pneumonic phthisis, fibroid phthisis, mechanical phthisis, and miliary tubercular phthisis. This does not by any means imply that miliary or tubercular deposits do not

attend the former varieties; but when occurring in these cases, the tuberculosis is not primary but secondary.

The causes of phthisis all agree may be divided into pre-disposing and exciting. Among the predisposing, heredity stands first, and it is curious how in some cases it will skip the second generation entirely, and appear with all its virulence in the third. Marriages between persons affected with the disease and those free from any predisposition, are believed by many to have the effect of producing it in the latter. Life in low, damp latitudes, prolonged mental depression, insufficient food, syphilis, scrofula—believed by some to be equivalent to phthisis—all may be ranked among the predisposing causes.

It is in the exciting causes that a possibility of discrimination between the different varieties of phthisis may arise.

Pneumonic phthisis is of frequent occurrence, particularly in damp, foggy climates. Chronic bronchial catarrh is often the cause of it. The slow inflammation extends through the alveoli into the peribronchial or adenoid tissue; consolidation, caseation, and ultimate excavation, following in regular sequence. Theodore Williams, in his brochure of 1884, tells us that bronchitis was the origin in 120 out of 1000 cases that came under his observation. Catarrhal, and more rarely croupous, pneumonia sometimes halts at the close of the second stage. Hemorrhage may or may not occur. Solidification continues; absorption of the inflammatory products does not take place; either tubercle is deposited, or, according to Shurly, a progressive breaking down of the exudative products, together with the pulmonary tissue, giving rise to well marked phthisis pulmonalis, may follow in some cases, even without the deposit of tubercle. Typical signs in these cases may be more or less obscured by the inflammatory nature of the early symptoms. Still in due time we have the slow, continuous fever, the nocturnal sweating, the lung consolidation and the softening.

Fibroid phthisis, a term introduced by Daniel Clark, often has its origin in pleurisy, pneumonia, or the combined pleuro-pneumonia, and is present in a very large number of tubercular affections. It is often a disease of prolonged

duration lasting for years. Age, too, is a leading factor in discriminating whether phthisis shall be pneumonic or fibroid in its character. The older the person affected the more likely is it to assume the latter type. Stout people with an abundance of adipose tissue, other things being equal, are fit subjects for pneumonic phthisis; while thin, wiry individuals have a greater tendency to the long lived fibrosis.

Mechanical phthisis, styled also anthracosis, is almost always the result of the habitual inhalation of solid hard particles. In the history of this disease, of which I have seen many instances, the phthisical symptoms are often preceded by chronic naso-pharyngitis. Laryngological examinations, in old cases, display a dry condition of the mucous membrane in the larynx and trachea, with sometimes the foreign matter visible on the surface. Sometimes nature attempts to throw off the foreign incubus by spasmodic attacks of croupous pneumonia, but as the patient on recovery again reverts to the old occupation, each successive attack becomes a more serious drain upon his impaired vitality, and finally consolidation, with attendant emphysema and caseation, finish the story of a shortened life.

Whether mechanical phthisis takes on the form of pneumonic or fibroid disease, depends largely upon the youthfulness, inherent vitality and constitutional bias of the sufferer: but the rule is for it to simulate the fibroid variety.

Miliary tuberculosis is by far the largest division of phthisis pulmonalis. In it the influence of family history is very great. Williams wisely distinguishes between hereditary and family predisposition. His experience gives 12 per cent. as the hereditary influence among the better class of phthisical patients; while family influence, with its greater breadth, gives 48 per cent. This family influence is greater among women than men in the proportion of 57 to 43, owing to the more sedentary life of the former.

Abnormalities of anatomical structure is a very important element in producing predisposition to phthisis, and has been ably discussed by Roberts, Bowditch, Garland and others. Beneke says: "There can be no doubt that an organism with a large heart, capacious arteries, small lungs and large liver, will work

out an entirely different result from one of the same age with small heart, narrow arteries, large lungs and small liver." His conclusion from extended observation being that ordinary phthisical subjects, with caseous pneumonias are distinguished by possessing small hearts, narrow arteries, large lungs, small livers and short alimentary canals.

In speaking of the conditions antecedent to the development of phthisis, Westbrook dwells upon the fact that the residual air in the lungs always prevents the foul air from being entirely expelled, and that any substance accumulating in the alveoli can only be liquified and absorbed, or expelled piecemeal. Should neither of these occur, the substance must remain, and either undergo some form of decomposition, usually caseous, or organize into new tissue. There are also certain circumstances which favor the development of tubercle in the apices which we are somewhat apt to forget, namely, the three factors engaged in the agency of expiration: 1st, the elastic contractility of the lungs; 2nd, the resistance of the chest walls; and 3rd, the upward pressure of the diaphragm. As Westbrook well puts it, "Only one of these, the elasticity of the lungs, acts upon the extreme apex;" while the power of the others gradually extending downwards, reaches a maximum at the base. As a consequence, the ordinary conditions, even in health, are not favorable to the full ventilation of the apex. In addition to this, the force of gravity tends to drain the fluids downwards, leaving dry abnormal products to harden; and pathological anatomists well know how dry and anemic the apices are usually found to be.

We are indebted to Frank Donaldson for an able article treating upon the influences of city life upon consumptives, meaning those who inherit a predisposition to phthisis. The comparative unhealthfulness of cities over rural districts he proves by statistics: In Amsterdam there are 171 deaths to 100 births; in Berlin 131 deaths to 100 births; and in London 124 deaths to 100 births. In London annually the deaths exceed the births by 10,000. As a consequence London would decline rapidly in population if it were not for the constant influx of strangers. In England the proportion of the death rate from consumption is 25 per

cent. greater in the cities than in the country ; while in the whole temperate zone 10 per cent. of the population die of phthisis. In the city of New York the ratio increases to 14, in Boston to 15, and in Marseilles, with its low-lying seaboard, to 25 per cent. In elevated cities with good drainage the mortality is below the average.

Malygienic conditions promote the development of consumption to a large extent in crowded cities. Impure air, poor food, defective sunlight, deficient clothing, lack of cleanliness, debilitating fevers, which prevail to so large an extent among the poor, operate indirectly and directly in promoting the ravages of this disease ; and it is they who suffer to such a large extent from phthisis. According to D'Espie it produces 68 deaths in 1000 among the rich, and 223 among the poor. Prof. Wilson says the quantity of oxygen is diminished even in the streets in large cities : and Prof. Tyndall has proved by the electric light, that the whole atmosphere is polluted to a more or less extent with suspended organic and inorganic matter. To illustrate the importance of pure atmosphere, I might mention that in the barracks of the Footguards of London, only 331 cubic feet were allowed for each soldier, and the mortality from phthisis was 13.8 per 1000 ; while in the Horse Guards 572 cubic feet were allotted to each man, and the mortality from phthisis was only 7.3 per 1000.

The London *Lancet* of Feb. 9th of present year, in a notice of James' new book on the etiology, pathology and treatment of phthisis, speaks of the importance of nutrition as a factor in its evolution. James says that "phthisis is due to a condition of deficient nutrition, permitting the growth and reproduction in lung tissue of a lower form of organized life." The disease is most apt to occur when growth passes into maturity ; and the excessive nutritive power necessary to growth being expended, the lung tissue is least able to resist the inroads of the bacillus. He also says that "the importance of the bacillus as a factor, in the etiology of phthisis, is subordinate to that of tissue nutrition."

As the bacillus tuberculosis is believed by many at the present time to be the sole exciting cause, it may be as well to examine briefly upon

what data this theory is based. Experiments have proved that the inoculation of rabbits, guinea-pigs, monkeys, etc., by the insertion of tubercle beneath the skin would produce miliary tubercle in the lungs and other organs of the animals infected. Later observers have devoted much time and care to the culture of the bacillus, and even when the culture has been removed several generations from the original bacilli, they have, upon injecting it into animals, produced well-marked tuberculosis. The results, when scientifically conducted, have been uniformly the same. In like manner a watery or oleaginous spray of tubercle containing bacilli, when applied to the respiratory tract of the lower animals, has likewise produced the disease. George Cornet, in *American Journal of Medical Sciences* for the present month, following out Esmaich's plan, has collected the dust from the walls of an apartment occupied by tuberculous patients, and in inoculating it into guinea-pigs, in some cases produced tuberculosis. In the January number of the *Journal of Laryngology*, Apmann, of Dresden, states that he has examined the excrement of flies, taken from the rooms of tuberculous patients, and found numerous bacilli in it. From it and portions of the flies' intestines, he got cultures sufficient to inoculate rabbits. And still further, Eugenic de Mattei, in the February number of the *Canada Lancet*, is reported to have obtained numbers of bacilli from the skin of a tuberculous patient.

But there is a reverse side to this shield. Many experiments have proven, that in guinea-pigs and rabbits, tubercle can be produced by inoculations of pus, putrid muscle, diseased liver, etc., taken from subjects entirely free from tubercle. Burdon Sanderson produced tuberculosis in a guinea-pig by passing a cotton thread beneath the skin. Dr. Sanderson also affirms that in injecting pus into rabbits, where the death occurred within forty-eight hours, it arose from pyamic abscesses, while in the cases of prolonged life, tuberculosis was the cause. Naegeli proved that micro-organisms are incapable of passing from liquid media into the air ; and later observers have proved that air expired by phthisical patients is free from the tubercle bacillus. Although Cornet, in the case related, found some bacilli on the walls of the

room, yet he himself stated that his experiments did not sustain the prevailing idea that the bacilli were present in the air. Out of a very large number of examinations, he only found bacilli in 27 per cent of them; and out of a multitude of what he considered undoubted bacilli cultures, only 15 per cent. of his experiments resulted in tuberculosis; and he accepts it as proved that bacilli cannot multiply under ordinary conditions outside of the human body; and concludes that the bacilli found on the walls must have come from some animal organism affected with tuberculosis. Would not Hapmann's suggestion of the excrement of flies be sufficient to explain the cause? In the last case I quoted that of Mattei; by his experiments he proved that the perspiration itself of phthical patients did not contain bacilli; and arrived at the conclusion, without proof, that the bacilli must have been deposited on the skin by the air.

Whether we should consider this question as finally settled seems to me to be open to the gravest thought, if not doubt. While the presence of bacilli in tuberculosis has been established, and its transmission from one individual to another by operative inoculation became a matter of certainty; yet there is much ground still unexplored, and many serious problems still unsolved. The facts that the air itself does not carry the bacilli, when breathed from the lungs of a tuberculous patient, as proved by Naegeli, Cornet and others; and that the natural fluids of the body, as the sweat in the investigation made by Mattei, do not contain the organism, certainly help to shroud the theory in difficulty. The existence of the bacillus in the body, previous to the development of tubercle, pathologists do not claim, merely holding that the development of tubercle and bacillus are synchronous the one with the other. This of course refers to mankind, inoculation so far not having extended to them. On the other hand, where animals have been inoculated, we are never told that bacilli are found alone in the lung tissue upon microscopic examination; but that miliary tubercle is found, and with that tubercle the bacillus.

If the theory as advocated be the correct one, we might ask in cases of heredity among better class people, when hygienic and sanitive regulations are properly enforced, what is the *modus*

operandi of the development of tubercular disease in a patient? The system has been healthy from childhood to budding maturity. There can be no bacilli there. There are none in the atmosphere which he breathes, nor in the spring water that he drinks. His food is all cooked at a temperature which would destroy any micro-organisms with which it might possibly have been tainted; his milk is from dairy-fed cows, free from all tubercular disease; and his fruit gathered from the orchard by which he lives. Yet without cold, without any apparent exciting cause, he contracts tuberculosis and droops and dies. Can the bacillus explain it? So far I do not think it has succeeded. I do Quite possibly it may, but with all the scientific research of recent years, the question is still too much shrouded in mystery to enable us as yet to propound an irrefragable dogma of truth:

I might say that this view is sustained by some even of the most recent writers. While James, whom I have already quoted, claims that the importance of the bacillus as a factor in etiology is a subordinate one. Prof. Aufrecht, in his lectures at the Magdeburg hospital, is reported by the February number of the *American Journal of Medical Sciences*, as distinctly declaring that he did not believe the bacillus to be the cause of phthisis.

39 CARLTON ST.

Selections.

MATERNITY HOSPITAL OF PHILADELPHIA.

SERVICE OF BARTON COOKE HIRST, M.D.
Hæmaturia in Pregnancy.

This is a subject which receives almost no attention in current works on obstetrics, and yet blood in the urine is a symptom of not such very rare occurrence in the pregnant woman, and is one, moreover, that always excites the alarm of a patient and those interested in her, and may cause the attending physician some anxiety.

M. S., primigravida, aged twenty-six years. When about six months pregnant she first noticed that her urine was bloody; the hæmaturia appeared suddenly, and to as great a degree as it has since attained. There is no history of malarial infection. There have been

no intervals in which the urine was clear; at every micturition there has been a considerable quantity of blood mixed with the urine. There is no history of traumatism. As long as the patient can remember she has suffered pain over the region of the kidneys, which, at intervals, has become quite intense, shooting down along the course of the ureters. Since the appearance of the hæmaturia there has been some difficulty in urination; the flow is suddenly stopped, apparently by the lodgement of a small clot in the urethra; as soon as this is expelled the stream again becomes free. The condition persisted until the delivery of the infant. On the second day of the puerperium the quantity of blood was much diminished; on the third day it had quite disappeared, and there is now, nine days' post-partum, no trace of it.

The explanation of this case, as of the majority in which bloody urine appears during pregnancy, is very likely to be found in bleeding hemorrhoids of the bladder, produced by the pressure of the large gravid womb upon the pelvic veins.

There were symptoms pointing to the possibility of an impacted renal calculus, but the absence of acute pain while the patient was under our observation, the sudden onset of the hæmaturia when the uterus had reached a size to exert pressure upon the pelvic organs, the rapid disappearance of the blood as soon as this mechanical obstruction was, in great part, removed, all point to the hemorrhoidal origin of the hemorrhage.

The treatment of such a case can be little more than expectant until pregnancy is terminated, unless—a rare event—the quantity of blood lost is alarming.—*Med. News.*

DIET IN DYSPEPSIA AND INDIGESTION

The *Dietetic Gazette* gives an article on the subject from which we extract the following referring to the dyspeptic and his diet:

"The general catarrhal condition of his mucous membranes, of which he now complains so much, can best be cured by copious draughts of hot water before meals. Antiseptic and astringent sprays to the upper air passages may be necessary, but our experience and belief is, that the whole track will clear up when physio-

logical life is resumed. Washing out the stomach is rarely called for, except in extreme cases.

Then the diet should be strictly according to the following table:

MAY TAKE

SOUPS, ETC.—Thin Soups, Beef Tea, Broths.

FISH.—Raw Oysters.

MEATS.—Beef, Mutton, Lamb, Chicken, Game, Venison, Chopped Meat, Meat Pulp.

EGGS.—Poached, Soft Boiled, Raw or whipped up with water and liquor or wine.

BREAD AND FARINACEOUS ARTICLES.—Bread sparingly, Corn Bread, Rice Cakes, Stale Bread and Butter, Macaroni, Sago, Tapioca, Dry Toast.

VEGETABLES AND FRUITS.—Green vegetables, such as Spinach, Turnip Tops, Cresses, Salads, Celery, Sorrel, Lettuce, String Beans, Dandelions, Chicory, Asparagus; Oranges, ripe Peaches and Pears.

DRINKS AND LIQUIDS.—Water, abundantly; Hot Water an hour before meals; Koumiss, Buttermilk, Milk and Lime Water, Milk and Seltzer, Tea, Claret, Dry Wines. Thoroughly masticate all foods.

AVOID

Rich Soups, all Fried Foods, Veal, Pork, Hashes, Stews, Turkey, Sweet Potatoes, all Starches and Saccharine Articles except as allowed, all Gravies, Made Dishes, Sauces, Desserts, Pies, Pastry, Puddings, Ice Cream, Sweet Wines, Malt Liquors, Cordials, Uncooked Vegetables, White Potatoes, Cooked Oysters.

In addition it will be necessary to give thirty drops of dilute hydrochloric acid together with about ten grains of a good pepsin after meals, and the bowels should be kept open. The great difficulty will be to hold the patient to the strict diet. In order to obtain success, however, this must be done, and in the majority of cases the result will fully justify the effort.

Of course the above table can be gradually extended or modified to meet peculiar conditions. But as it stands, we submit it as having served admirably in a type of cases most of which were hitherto unmanageable."

THE TREATMENT OF SEMINAL EMISSIONS.

The treatment of cases of nervousness from masturbation, or more properly nervousness about former masturbation, is commonly not satisfactory, but there is one measure which has proved so useful in several cases under my care, that I

think it worth while to note it that it may be tried by others. It was, so far as I know, originally suggested by Professor John H. Brinton some years since, and I believe has proved of value in his hands. It consists in the application of a blister over the sacrum.

The measure is a somewhat severe one, but the patients are apt to have suffered many things of doctors, from advertising quacks up, and various treatments, mostly of a depressing or merely palliative sort, with small results, and I find they offer little objection. What is more, the improvement is usually lasting. Of course, the use of the blister need not preclude other and additional treatment, hygienic and medicinal.

The cases are, roughly speaking, divisible into two classes. One has emissions, usually during sleep, without erection or with only an attempt at erection; in the other the semen is only voided during erection, or upon some irritation, mental or physical. In the former sort, the treatment should be tonic. I like a mixture of dilute phosphoric acid and strychnia, which I generally give by the following formula:—

R Strychniæ, gr. j.
Acidi phosphorici dil., f ʒ ij.
Sig. 25 drops in water after each meal. M.

In the latter kind bromides, or better, a mixture of hydrobromic acid and bromide of soda or of lithium, have done me good service.—*J. K. Mitchell, M.D., in the University Medical Magazine.*

AMPUTATION OF THE LEG.

Several German surgeons have lately proposed modifications of the method of performing amputation of the leg, with a view to avoid necrosis of the soft parts over the sawn anterior edge of the tibia. They differ somewhat in detail, each aiming to form flaps which will produce the desired result.

Von Mosetig-Moorhof makes two lateral musculo-integumentary flaps, the outer being the larger, formed so that when united from behind forward there is some superabundance of tissue over the crest of the tibia, and so tension and the resulting necrosis are prevented.

Fuhr favors a circular incision through the skin, then longitudinal incisions, in front a

finger's breadth external to the crest of the tibia, behind, exactly opposite, thus forming two rectangular flaps. The outer flap consists of skin and fascia, the inner one of skin, fascia, and the periosteum of the anterior surface of the tibia. These flaps are reflected, the muscles cut, the bones sawn through, and the edges of the flaps united. The cicatrix at first extends obliquely from above and externally downward and inward, but finally comes to lie on the posterior surface. The skin of the stump remains moveable over the crest of the tibia and its sawn surface.—*N. Y. Med. Journal.*

THE

Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS
OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

When a change of address occurs please promptly notify the Publishers, Messrs. J. E. BRYANT & Co., 64 Bay Street.

TORONTO, MAY 16, 1889.

LENGTH OF THE COURSE OF MEDICAL STUDIES.

•HAPPILY for medical education in Canada, a three years' course is likely soon to become a thing of the past. For many years—too many by far—the University of Toronto stood alone in its rigid adherence to the rule requiring from students an attendance at lectures for four full sessions before admitting them to its final examinations. The Ontario Medical Council, since its relief from the rivalry of certain British corporations which sold diplomas to our three years graduates, has faithfully supported the Provincial University in its efforts to maintain a *bona fide* four years' course. We are encouraged to hope, from information lately received, that the other Universities are likely to follow the example of Toronto, and demand four years' actual attendance on lectures. We think they are fairly entitled to some credit for this, even

though they took forty years or more to consider the matter.

The world, however, is not going to stop moving even yet. With all the practical laboratory and hospital work which is now required in both primary and final subjects, it is found that four sessions of six months each do not furnish sufficient time. Shall the sessions be lengthened, or shall British regulations, demanding one or two additional summer sessions, be adopted? We incline to the latter course, and hope that the Council will make attendance on at least one summer session compulsory, in addition to the four winter sessions. The summer sessions, which have been conducted during the last few years in the Toronto medical colleges have not always been well attended; but we are pleased to know that the present summer session at the Toronto University Medical College is a pronounced success.

We notice that in England the regulations of the Conjoint Board encourage quite a radical change by recommending intending medical students to commence attendance on lectures on May 1st, instead of October 1st. Under such an arrangement the student would probably attend lectures and demonstrations in chemistry, practical chemistry, chemical physics and probably osteology before commencing to study anatomy, physiology and pharmacy at the regular winter session. In Canada the work of the summer session has been mostly confined to the final subjects, and it is unlikely that any change in this respect will be made in the near future.

ONTARIO MEDICAL ASSOCIATION.

It is now nine years since this Association came into existence, and year by year its numbers have increased, its meetings have grown in interest, and the fraternal feeling among its members has been greatly stimulated by the yearly contact of soul with soul. This is as it should be, and we are glad to note that our Association has almost one-third of the physicians of the Province enrolled among its members. But greater things, we hope, are in store. The Association should have every member of the profession in the Province upon its roll-call.

When this is brought to pass the influence of the Association upon the community at large will be incalculable. Its dictum will come with weight when legal measures are necessary in behalf of sanitation, when public opinion requires to be educated upon any medical question, and on the side of science as against quackery in its many forms.

The papers read yearly, and the discussions which ensue, serve to keep up and elevate the standard of medical knowledge, and to stimulate investigation and careful methods of observation on the part of the profession at large, many of whom might otherwise lapse into habits of idleness.

These meetings also serve to bring the profession of Ontario prominently before their brethren of the neighboring republic, and increase their knowledge of the high class of work done among us.

On these grounds, as well as upon many others we might mention, did space permit, we urge any of our readers who have not as yet become its members to join at once, as a duty they owe to themselves, the public, and the profession as a body.

The following is the list of papers which are intended to be read at the meeting on the 5th and 6th of June:

Discussion in Surgery will be upon "The General Management of the Patient and Sick-room in Surgical Cases."

Discussion in Medicine will be upon "The Prognostic Significance of Moderate Cardiac Hypertrophy and Dilatation."

Discussion in Obstetrics, on "Laceration of the Perinæum."

Discussion in Ophthalmology, upon "Glaucoma."

Discussion in Therapeutics upon "The Uses and Abuses of Antipyretics."

Dr. Roswell Parke, of Buffalo, will read a paper upon "The Radical Cure of Hermia."

Dr. A. Smith, of New York, upon "The Treatment of Pyothorax with the Mechanical Results of opening the Pleural Cavity," to be illustrated by apparatus."

Dr. Skene, of Brooklyn, upon "Intraligamentous Ovarian Cystoma."

Dr. J. E. Graham, of Toronto: "The Treatment of Eczema."

Dr. Adam Wright, Toronto: "Prevention of Puerperal Septicæmia."

Dr. Jas. Grant, jr., Ottawa: "Transient Albuminuria."

Dr. Howitt, Guelph: "Miscellaneous Laparotomies."

Dr. Buller, Montreal: "Remarks on Antiseptic Ophthalmic Surgery."

Dr. Mitchell, Emmiskillen: "Early Operations in cases of Obscure Abdominal Disease."

Dr. Sweetnam, Toronto: "The Probable Future of Electricity in Gynæcology."

Dr. Ryerson, Toronto: "Some Forms of Headache."

Dr. P. Macdonald, Wingham: "Nerve Stretching in a Case of Obstinate Sciatica."

Dr. Tye, Chatham: "Prognosis in Albuminuria."

Dr. McPhedran, Toronto: "Abortive Forms of Typhoid Fever."

Dr. Gibson, Belleville: "Interesting Cases in Practice."

Dr. R. Newman, New York: "Electrolysis in Surgery and Gynæcology."

Dr. Dickson, Toronto: "A Plea for Electricity in Medicine."

Dr. Smith, Orangeville: "Pathological Relations of Spleen and Bone Medulla."

Dr. Holford Walker, Toronto: "Some Practical Points in Gynæcology and Abdominal Surgery."

Dr. Price Brown, Toronto: "The Treatment of Phthisis Pulmonalis."

Dr. Letcher, Henderson, Kentucky: "Penetrating Gunshot Wound of the Abdomen."

Dr. Anglin, Kingston: "Cases of Typhoid Fever with Perforation of the Bowel."

Dr. Groves, Fergus: "A Case of Vaginal Hysterectomy with Abdominal Ovariectomy."

Dr. McKinnon, Guelph: "Auto-Elimination of an Abdominal Tumour through an Exploratory Incision."

Dr. Neil McPhatter, Guelph: "Cholecystotomy."

Dr. Vanderveer, Albany, N.Y.: "Appendicitis, Perforative Appendicitis, and Peri-Appendicitis."

Dr. J. E. White, Toronto: "On recent Modes of Treating Fractures above the Wrist Joint."

Dr. E. E. King, Toronto, will demonstrate the Use of the Cystoscope in Diagnosing Obscure Abdominal Disease.

Papers are also expected from Dr. Teskey, Toronto, and Provost, Ottawa.

Dr. J. Campbell, Scaforth: "Reports of Cases, Surgical and Medical."

Dr. H. Hunt, Toronto: "Cases of Laryngeal Diphtheria."

Dr. Powell, Ottawa: "On Two Cases of Perityphlitis, with Abscess—recovery in both, but by different methods."

Dr. W. Gunn, Clinton: "A case of Scleroderma," and exhibition of patient.

DEATH FROM CHLOROFORM.

ONE OF the saddest occurrences in medical practice, a death following the administration of chloroform, happened on January 25th, in the village of Waterford. The patient was brought under the influence of the anæsthetic by Dr. D. Rose, and after the removal of the towel a dentist commenced to extract some teeth. During the operation the heart's action suddenly ceased without any premonitory symptoms, and all efforts to resuscitate the patient failed. At the last Hamilton Assizes an action for \$5000 damages was tried, the husband being the plaintiff. According to the evidence it appears that all ordinary precautions were taken, and well directed efforts were made to restore the patient to life. We are unable to refer particularly to the statements of the various physicians, but may say they were generally favorable to the defendant. The result of the deliberations of the jury was a disagreement.

In the interests of the plaintiff we regret exceedingly the distressing accident by which he and his children lost a wife and mother. To the defendant, whom we know to be a conscientious and careful practitioner, we extend our sympathies, and regret that his worries should have been aggravated by this action for damages. It is generally recognized that such accidents, in a large proportion of cases, cannot be foreseen, and have frequently happened in the hands of the most competent and skilful, from reasons which cannot be satisfactorily explained. It is remarkable that deaths from

the administration of anæsthetics are unduly frequent during comparatively insignificant operations such as the extraction of teeth and the removal of ingrowing toe-nail.

Such a disastrous result as this—a death from chloroform in a dentist's office—should impress upon every physician or surgeon the serious responsibility he assumes in each and every case when he undertakes to administer an anæsthetic. A perfectly safe anæsthetic has not yet been discovered, and probably never will be. Profound anæsthesia brings our patient close to the next world, how close, in many a case, we may possibly have no idea. Let us ever endeavor to choose the anæsthetic which is best suited for each individual case. Let us ever look carefully for those symptoms which indicate danger. Let us ever be prepared to counteract these dangerous symptoms when they appear. In a general way we may say that in most cases of exhaustion or debility ether is safer than chloroform, but when there is bronchial or renal disease chloroform should be preferred.

THE STUDY OF CHEMISTRY.

SOME members of our profession appear to think that chemistry is one of the comparatively useless subjects to the medical curriculum. When taught or studied in a perfunctory manner it is certainly of little use, but we happen to have reached that period in the history of medical education where we cannot ignore its vast importance. From this point of view the following quotation from the *British Medical Journal* will be found very interesting: "Of all the pure sciences, chemistry is that which is most necessary to the physician and practitioner. To say the least, it requires study, diligent study. Chemistry presents many features which excites a young man's interest. The student's exuberant zeal requires control in respect to the preparation of malodorous, poisonous or explosive compounds, yet the discipline of the practical chemistry laboratory is calculated to stand in good stead in after life. The handling of reagents, testing for poisons, and cleaning of apparatus after use, all prepare him for the duties of the sick room and operating theatre. They demand observation, caution and cleanliness."

NOTES.

KANKAKEE.—There is perhaps no department in medicine in which greater progress has been made in modern times than in the treatment of insanity, and these improved methods are seen to the best advantage in the large asylum at Kankakee, Illinois.

That institution now accommodates sixteen hundred and forty patients, and the non-restraint system is carried out to its fullest extent.

The greater number of the patients live in cottages and are allowed to roam about at will. About four hundred are confined in the main building. The latter are partly made up of the convict insane and partly of acute and curable cases who are under medical treatment. A large number of those who live in the cottages have their meals together in an immense dining hall. They go into the dining room in a quiet, orderly manner, and while at dinner the only difference noticed in the behavior of the patients is that there was very much less noise than one would expect from the same number of sane people. There was scarcely any talking, a few muttered to themselves.

No restraint is practiced with those confined in wards. A strong canvas suit is used with those who would otherwise tear their clothing.

There seem to be two principal features in the modern management of the insane which render the old restraint system unnecessary. (1) A careful selection of patients, and (2) a thorough training of the assistants. One would be surprised to see how soon a raving maniac could, in many instances, be calmed down by a skilful nurse.

Various industries have been introduced so that all patients who can be induced to work, are employed. In this way the cost of maintenance is much lessened and the health of the patients is improved.

Dr. Dewey, the Medical Superintendent of the institution from its commencement, has every right to be proud of this vast and enduring monument of his industry and perseverance. Through his efforts the cottage system has been established as a successful method in the management of insanity.

Thirty-five per cent. who have passed out of the institution have been sent out cured. This is an excellent result when it is remembered that

the asylum was largely filled at first by chronic lunatics from other institutions. It is probable that the percentage of recoveries will be much greater in the future.

A large and successful training school for nurses is carried on in connection with the asylum. This school has been of the greatest benefit, not only to this institution, but also to the general public. One can easily understand how important it is for those who have the immediate charge of insane patients to be well educated and trained. The successful treatment of those mentally diseased, depends as largely upon the nursing as that of those physically affected.

ANN ARBOR.—A physical and bacteriological laboratory has recently been established at Ann Arbor. It is a plain, red brick structure, which presents every evidence of having been built with the most rigid economy.

The physical department occupies the basement and the first flat. The second flat and attic are devoted to animal chemistry and bacteriology. The building itself cost \$30,000, and they now propose to spend about \$10,000 in furnishing the chemical and bacteriological department.

The building does not present the imposing appearance which characterizes the Toronto University Biological laboratory now in course of erection. We understand that the University authorities intend to furnish and equip the new Laboratory in the most thorough manner, so as to make it equal if not superior to any other on this continent.

A most important point in the success of a bacteriological laboratory is the appointment of the Professor or lecturer who shall control it. Provision should be made to grant him sufficient salary so that he could devote a large portion of time to that branch.

The University of Michigan is fortunate in having such an enthusiastic, hard-working man as Dr. Vaughan. He is a practising physician, a proficient in animal chemistry, and at present he is devoting a large part of his time to bacteriology. He thus has the opportunity of studying a disease clinically, than of isolating and cultivating the bacterium peculiar to the disease. His knowledge of chemistry enables him to separate out the ptomain produced by the organism un-

der observation. If Professor Vaughan is thus able to continue his work for even a few years, he will add much to our knowledge of the nature of many zymotic diseases.

When the bacillus of a well-known affection is seen under cultivation, and one can at the same time see of the ptomain produced by the bacillus, one has hope that at last the true nature of many of our common zymotic diseases will be more fully understood.

A lively discussion is now going on as to the advisability of removing the medical Faculty from Ann Arbor to Detroit. This question has arisen many times in the State Legislature. Strong arguments may be urged on both sides.

It would be a great pity to injure in any way the efficiency with which instruction is given in the primary branches of medicine.

One of the greatest defects of medical education as given on this continent is the want of thorough and practical instruction in Physics, Chemistry, Anatomy, and Biology. We would regret very much to see such a Faculty as that at Ann Arbor abolished, as every facility is there given for study in the departments mentioned, and there is so little to divert the mind from scientific work.

It is a great pity that the authorities of the University of Michigan do not insist upon a higher entrance examination for students of medicine. They are in a position to render the greatest service, both to the profession and to the public by insisting on a high standard of culture for those entering the study of medicine, and it is to be hoped that before long changes will be made in that direction.

A CURIOUS arrangement with regard to physicians' consulting rooms prevails in Chicago. A very large number of the leading practitioners, while living in the residential part of the city, have their offices near the centres of business. One could easily understand that in the case of specialists this might in some respects be more convenient; but why family physicians should have consulting rooms on the fifth or sixth flat of a down-town building, cannot be easily explained.

We are inclined to think that the arrangement is not a good one, and must have an injurious effect upon the profession.

The physician, whether a general practitioner or a specialist, is eminently a social individual, and the old English idea which makes him almost a member of each family he attends is, perhaps, the correct one.

In Chicago the term metaphysician is used to designate that species of quack who calls himself here the Christian Scientist. Not long ago these metaphysicians fairly swarmed in the western metropolis, and during the excitement they reaped a rich harvest of fees. It did not take long for them to run their course, and those duped by them have returned to their former physicians.

The facilities for the study of medicine in Chicago seem to be excellent. The medical schools and hospitals are in close proximity and every opportunity is given for clinical study. When it is remembered that Chicago is the second largest city in the United States, having a population of nearly a million, one might expect that with the characteristic energy of the inhabitants, it will soon rank second to none as a medical centre.

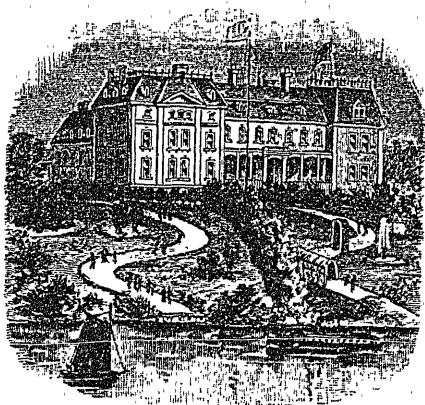
DR. PAUL BRICON, a prominent member of the staff of *Progrès Medical*, died on April 7th, of heart disease.

SULPHONAL is now recommended for the night sweats of phthisis.

DURING the month of February one hundred and sixty persons were treated at the Pasteur Institute in Paris.

GUYON has twice recently with success performed the operation known as nephorrhaphy—the fixing by sutures of the floating kidney to some point in the abdomen.

THE BANFF MEETING.—The Grand Trunk Railway has extended to the Canadian Medical Association an offer of reduced rates from all points on their line equivalent to that given by the Canadian Pacific Railway, so that members may leave for Banff from the station nearest to them on either line at the same cost. This will also enable members from Central Ontario who wish to do so, to join the main line of the C. P. R. at North Bay.



BISHOP RIDLEY COLLEGE

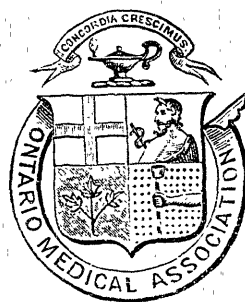
OF ONTARIO, (LIMITED).

ST. CATHARINES.

A Protestant Church School for Boys, in connection with the Church of England, will be opened in the property well-known as "Springbank," St. Catharines, Ont., in September next, 1889.

Boys prepared for matriculation, with honors in all departments, in any University; for entrance into the Royal Military College; for entrance into the Learned Professions. There will be a special Commercial Department. Special attention paid to Physical Culture. Terms moderate. For particulars apply to the Secretary, 26 King St. E., Toronto.

FRED. J. STEWART, *Sec.-Treas.*



ONTARIO

MEDICAL ASSOCIATION.

NINTH

ANNUAL MEETING.

June 5th and 6th, 1889,

The Ninth Annual Meeting of the Ontario Medical Association will be held in the City of Toronto, on Wednesday and Thursday, the 5th and 6th of June.

Return tickets will be issued at reduced rates to all properly qualified members of the profession.

Physicians desirous of reading papers or presenting cases before the Association, are requested to notify the Secretary of the subjects of such papers or cases, on or before the 14th of May.

W. H. Henderson,
President,
Kingston.

D. J. Gibb-Wishart,
Secretary,
30 Carlton St., Toronto.