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CANADA
MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Case of Acute Fibrinous Bronchitis, with Expectoration of Tube Casts. By E. D. WORTHINGTON, M.D., of Sherbrooke, P.Q.

On the 11th of January last I received a very urgent telegram, asking me to meet Dr. McGowan, at Bolton. The patient, Mrs. R—, wife of the Superintendent of the Huntington Mine, is an English woman 41 years of age, well-formed, and above the average height. She is the mother of thirteen children, the youngest being only three months old. She has had all the diseases of childhood, including Hooping cough, and on two occasions suffered from some affection of the lungs which she describes as being of an inflammatory character, and which she thinks her doctor in Devonshire called Pneumonia. With the exception of the above ailments she has enjoyed uninterrupted good health, and been singularly free from cough, or other indication of lung disease. Some of her relatives however, on the mother's side, died of phthisis.

Dr. McGowan's history of the case is as follows:—the extracts quoted being from his notes. When first seen by him on January 7th, "the pulse was 98, respiration 25 and laboured. On examination by stethoscope found the lower lobes of both lungs in a state of engorgement. Ordered sinapisms over the whole chest, and gave liq. ammon. acet. with antim tart. every four hours, alternately with minute doses of morphia and ipecac." "The symptoms remained about the same until the 10th, when

there was some improvement, pulse 88, resp. 21, dulness has disappeared. Gave the following mixture :

Syr. Scillæ comp. ℥iv
 Ammon. Muriat ℥ii
 Potassii. Cyanid gr̄iii
 Sol. Morphiæ Muriat ℥iii
 Extr. Glycyrrhizæ ℥vi
 Aquæ ad ℥iv

A tea spoonful every four hours.

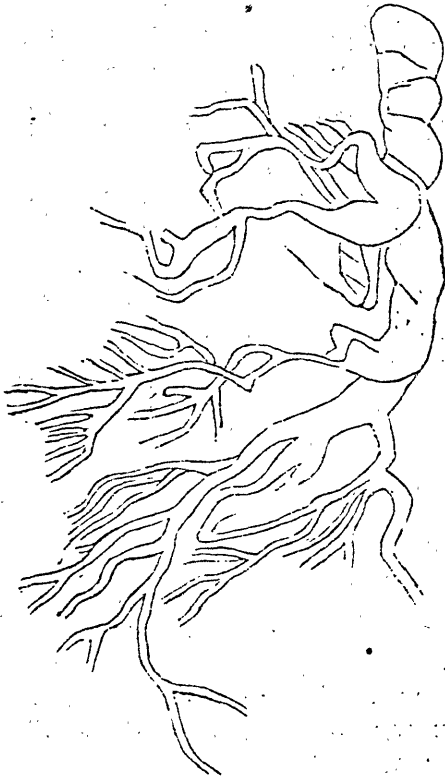
On the evening of the 10th, I noticed the tube casts for the first time."

It appears that on the evening of the 10th, Mrs. R. was suddenly seized with most alarming symptoms of suffocation, constriction and pain within the chest, particularly on the left side, attended with great distress, countenance and skin livid, dyspnœa, and violent paroxysms of coughing, which ended in her coughing up a quantity of what ultimately proved to be fibrinous tube casts of the bronchi, equal in bulk to about a large table spoonful, when washed from the accompanying catarrhal expectoration. The sputa were at first, and only at first, very slightly tinged with blood, and a few blood points were observed on some of the tube casts. In a few hours another paroxysm of coughing ended in more expectoration of tube casts, the disappearance of cyanosis, and most marked relief to the patient.

When I saw Mrs. R. near midnight of the 11th I had the consolation to find—after my lonely drive of 30 miles—the patient wonderfully calm, breathing quietly, suffering no pain, and anxious only as to the significance of the beautifully moulded bronchial trees, which had appeared "in such questionable shape" and which were carefully preserved in a bottle of water for my inspection. To her, and her husband, they were ominously suggestive of bronchial tubes! and though I had never seen tube casts before, having only read descriptions of them, I was happy to be able to corroborate, much to the patient's peace of mind, Dr.

McGowan's assurances that they were only casts of the bronchial tubes and not the bronchial tubes themselves!

Some of the larger specimens had a diameter at the base of fully three-eighths of an inch, they were distinctly cylindrical, of a clear white, or perhaps pearl color, with here and there very minute and delicately coloured pink points.



One of the specimens I sent to Dr. Howard was, when fresh, a particularly fine one. In an ordinary Quinine bottle of water it floated with its top turned downwards, reaching from the cork to the bottom of the bottle, branching out on each side, and representing a perfect white gem of a tree. That one had, at first, twenty-eight terminal branches, and

was at least four and a half inches in length. The wood-cut represents the actual size of one of the largest casts. I have to thank my friend Dr. A. A. Browne for the very careful sketch from which it was taken.

Perhaps I should say something upon the physical signs, on examination of the chest; but really on this point there is nothing to relate. The patient was better when I saw her, and beyond a carefully prolonged act of inspiration and expiration, as if fearful of inducing a paroxysm of coughing, and slight crepitation, circumscribed, in the posterior and lower part of the left lung, I could detect nothing abnormal.

The chest was clear and resonant throughout, except at this circumscribed spot; and the respiratory murmur was perfect. Only a short time before I arrived a free expectoration of casts had occurred.

I may mention here that all the children in the house had been suffering from Hooping cough for several weeks. There was not, at any time, in the case what could be called Hæmoptysis; only a few of the tubes had blood points, and a few times, early in the case, the mucus coughed up with the casts, was tinged with blood. Beyond this there was no hæmorrhage; a circumstance rather unusual, I believe, in such cases.

I used above the word 'quantity,' to mark the amount expectorated, but will be a little more definite. Dr. McGowan had saved five or six magnificent specimens for himself, as well as some broken ones; beside these I was shewn a large pickle bottle containing upwards of twenty casts, measuring each from two to five inches in length.

All these had been coughed up before I saw the patient.

On the 20th April I saw Mrs. R., as she passed through Sherbrooke, on her way to England, but only for a few minutes. She had no cough or other evidence of lung affection. She told me that she had coughed up casts, in greater or lesser quantity, every day, up to near the end of March. Her estimate and that of her husband, as to the

quantity, was that when carefully washed from all mucus, *the casts themselves* would more than fill an eight ounce bottle, an estimate in my opinion much within the mark. They were carrying with them some remarkably fine specimens to England.

At no time during Mrs. R's illness, did her cough, or other symptoms, present the slightest resemblance to Hooping cough.

Pseudo-membranous, Croupous, or Fibrinous Bronchitis, Bronchial Polypi, Bronchial Croup, Plastic Bronchitis, &c., is, according to Riegel, "as a genuine, primary form of disease, *a very rare affection, and one which occurs more frequently in the chronic than in the acute form.* Its occurrence is so infrequent that even in large hospitals years and decades may pass before a single case of the kind comes under observation. Of acute, fibrinous bronchitis, with fibrinous expectoration, Lebert could find but seventeen observations, after a careful analysis of all the cases known at the time of writing."

Very many of our standard works on medicine make no reference to it, as a 'genuine primary form of disease,' or indeed allude to it either in its acute or chronic form, and I have diligently looked over Braithwaite from the first to the last number, without finding one single case reported. Tanner devotes about half a page to the subject, under the head of 'Plastic Bronchitis;' but it is evident that his remarks all point to a chronic form of the disease.

Watson in his Lectures, says: "Inflammation of these mucous membranes is, however, sometimes attended with the exudation of something which is very like coagulable lymph. The tracheal, bronchial and pulmonary membrane, the œsophageal, the intestinal, and that which lines the uterus, are all more or less subject to the formation of adventitious membranes under inflammation. Casts of the smaller branches of the air tubes have, in rare instances, been coughed up in large quantity; constituting what have been very inaptly called *bronchial polypi*. The

membranous exudation of croup is well known, a tubular substance is formed in the trachea, and sometimes fortunately expelled; but too often it suffocates the patient." In another place "I mentioned in a former lecture that the false membrane of croup sometimes descends a long way into the bronchi; even to their extremities. But I am speaking now of a different and less acute form of the disease, in which the *trachea being unaffected*, concrete masses, evidently moulded in parts of the hollow bronchial tree, are spat up; somewhat like bunches of worms, or the branching roots of a small plant. This I presume to be uncommon, for I have met with it *twice only in my life*." Doctors Warren and Paris, Mr. Worth and Sir R. Carswell, are then referred to as having met with cases, but they are apparently all of the chronic form. Watson's cases of the two brothers, the Barrister and the Professor, are very interesting; each attack in both cases being preceded by hæmoptysis. It is clear that in both cases there was a persistent congested state of the mucous surface of the bronchi, and that both were of a purely chronic character. Perhaps it would not be venturing too far to suggest that as a rule chronic cases are attended by free hæmoptysis, and that only a trace of blood attends the acute form of the disease.

By far the most complete treatise on fibrinous or croupous Bronchitis is that by Dr. Riegel of Cologne, in the 4th vol. of Ziemssen; the prefatory remarks to which, state that hardly any individual observer is in a position to acquire great personal experience, on account of its general rarity, and that of 58 cases worked up by Biermer, two only occurred under his own observation.

Biermer includes under the above name, "only those cases in which the croupous process is limited to the bronchi or has taken its starting point in these tubes." "Those observations in which the croup extended from the larynx to the bronchi are not included, nor those in which casts are formed in the bronchi during the progress of a croupous pneumonia" But he takes into consideration "the second-

ary bronchial croup," which is sometimes observed as a result of chronic affection of the lungs, tuberculosis for example.

Lebert also excludes those cases in which the fibrinous bronchitis is a continuation of fibrinous laryngitis; but includes cases in which casts have formed in the bronchi in the course of croupous pneumonia.

The article, however, adopts Biermer's division, namely, that which *commences primarily in the bronchi*. The disease is named fibrinous bronchitis by Lebert, "because the fibrinous nature of the inflammatory product constitutes its chief characteristic; the fibrine, in this affection, exuding as such from the bronchial capillaries, or the pulmonary capillary vessels, in company with the white corpuscles, or perhaps escaping as fibrinogen which promptly coagulates on exposure to air."

Among the predisposing causes to fibrinous bronchitis, Riegel, while confessing that we have not sufficient data for statistical purposes, inclines to the belief that it may be induced by the daily variations of the temperature, at particular seasons, which give rise to bronchitis and pneumonia. When the case of Mrs. R. occurred, cases of pneumonia and Hooping cough, were very common in Bolton, and the neighboring townships; but it would be very difficult to connect the Hooping cough,—even as an exciting cause—with the croupous bronchitis. Riegel, in describing the *acute* form says: "The disease may begin in the form and manner of an ordinary acute catarrh, with slight fever, more or less dry cough, feeling of oppression on the chest, loss of appetite, increased thirst, and similar symptoms. *After these catarrhal symptoms have existed for some days, severe symptoms occur more or less suddenly*, including intense dyspnoea, increasing to manifestations of suffocation, active febrile movements, dry harsh cough, usually without any or with scanty expectoration, severe oppression and feeling of anxiety, *sometimes even slight hæmoptysis*." Then, with a painful sensation of oppression in the chest, and dread of suffocation, comes the characteristic fibrinous expectora-

tion. The casts are either coughed up in a round ball, surrounded with a little mucus, or they are enveloped in a considerable quantity of catarrhal, purulent, or sanious sputa.

It is quite evident that even the most carefully conducted physical exploration will never succeed in detecting the existence of bronchial croup, as such, even in the severest cases. It is only when the fibrine cast appears that the nature of the disease is positively known. *Percussion* of the chest gives no prophetic sound, but the *respiratory murmur* is absent over all bronchi filled up by casts. There is no respiration there at all. "Hence it may be considered as a somewhat characteristic trait of this affection that while on the one hand the percussion tone is full and clear, the respiratory murmur, on the other, is absent."

When the expulsion of the fibrinous mass is complete the agony is over; the feeling of impending suffocation is gone; the dyspnoea, paroxysmal croup, and other distressing symptoms disappear, and the sufferer all at once experiences a degree of comparative comfort, but alas, only until fresh casts have again been formed. Then the routine of suffering and comfort alternates until recovery or death ends the case.

"The prognosis is in general doubtful in acute cases," about half of them dying. "On the other hand, the prognosis of chronic bronchial croup is much more favourable," according to Watson, "the complaint is not a dangerous one; and when death occurs during its progress, the fatal result is due to some disease of which the membranous exudation is merely a complication." A favorable prognosis may of course be given with more confidence if the patient either in the acute or chronic stage has already gone through the ordeal of expectoration of casts; age and constitutional vigor being considered.

According to Riegel, the indications as to treatment are, *first*, to remove the fibrinous masses present in the bronchi; *second*, to prevent their reproduction. The *first* is to be accomplished, if possible, by the time honored administra-

tion of emetics. The choice of emetics being "the recently introduced and amply tested Muriate of Apomorphia" which by subcutaneous injection "acts very promptly, is always certain, and is free from attendant unpleasant effects." Inhalations of lime water, lactic acid, carbonates of the alkalis, and hot water vapor are specially recommended. The *second*, viz., to prevent the recurrence of the attacks.

When the croupous bronchitis has developed in connection with an acute or chronic bronchial catarrh, *attack the bronchial catarrh*, and in addition avoid all sources of injury which experience has shown to give rise to bronchial catarrh. Finally Riegel sums up by stating that "there are no remedies, as far as is at present known, which are competent to prevent the recurrence of the attacks with any degree of certainty.

It is with a view of ascertaining the minute structure of the casts, that Dr. Osler has made a number of transverse sections, and I submit his report: "Each cast consists of a variable number of laminæ arranged concentrically, those in the centre being much folded and involuted. Under a magnifying power of 500 diameters the laminæ are seen to be translucent, structureless membranes, while the spaces between them are filled up with fine fibrils of fibrin, and innumerable leucocytes."

Sherbrooke. May 20th, 1876.

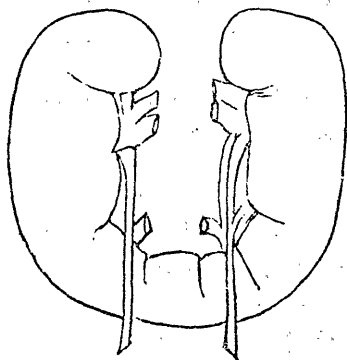
Horse-shoe Kidney. By J. D. CLINE. B.A. M.D.,

(Shown at the Medico Chirurgical Society.)

William Harrison, aged 35, was admitted into the General Hospital in January, 1876. There were evidences of commencing softening in the apices of both lungs. He was an extremely nervous man, when spoken to or examined he would turn pale, and tremble, and the action of his heart would become very tumultuous, the pulse running up to 150 or 160 beats in a minute. The softening of the lungs progressed very rapidly. There was elevation

of temperature constantly. He died on the 10th of April.

At the Autopsy we found a large number of small cavities in both lungs, and the intervals between the cavities stuffed with tubercle. The left ventricle of his heart was slightly hypertrophied. We found the following malformation of the kidneys. The two organs were fused into one mass, horse-shoe in shape, with the convexity downwards, the bond of union lying over the spine. The ureters passed down *in front of the kidney*, the left one opening into the left mass by three canals, the right one into the other side by one. There were but two renal veins, one for each side, opening into the upper part of



each hilum; and two arteries for each side, those opening into the upper part of the hilum arising from the aorta in the usual situation, the others arising from the aorta below the spermatic arteries, and entering the hilum at its lower part. On section we found a distinct pelvis for each side. The union consisted of true cortical structure, of the usual depth, along the concavity, while the rest which was the greater part of it did not appear to be pyramidal structure. The hilum of the left side was very much to the front. On looking up the literature of this malformation of the kidney I can find very little. In the transactions of the Pathological Society of London for 1862 Dr. Gibb describes a case which was affected with Bright's disease,

and mentions as being found in the London Museum at that time 19 specimens.

Wilks and Moxon in their Pathological Anatomy speak of it as very rare. The specimens differ slightly in the number and disposition of the arteries, veins and ureters. The ureters generally pass down behind the kidney. The convexity of the horse shoe is always downwards. One case is mentioned where the union was by fibrous tissue rather than glandular structure. I think in this specimen the greater part of the union is glandular. Dr. Browne has kindly given a drawing which shows the peculiarities of the malformation.

Convulsions, their Nature and Treatment. BY WILLIAM FULLER, M.D., C.M., Professor of Anatomy, University of Bishop's College.

(Read before the Medico-Chirurgical Society, Montreal.)

GENTLEMEN,—There are few circumstances more trying to the physician than the management of a case of convulsions, especially to one who has just commenced his career of practice, armed as he may be by knowledge acquired from lectures and books, but yet doubtful through want of experience of the practical application of the means which he has been taught to use. Regarding the suddenness of the call, the great anxiety of the parents, the frightful aspect of the patient, and the apparent necessity of immediate action all conspire to disturb that equanimity of mind necessary for correct observation and sound judgment.

In studying the physiology of convulsions I have come to the conclusion that they result from an anæmic state of the nervous centres produced by spasms of the vessels through irritation of the sympathetic nerve from local disturbance in some part of the organism, or from an insufficiency of blood in the vessels, as in case of excessive hæmorrhage, or perhaps from an altered state of that fluid from the poison of the eruptive fevers, or strychnine, &c.

A spasm is either local or general in the organs of the mind, producing irregular trains of thought, hysteric emotion, or depraved irresistible appetites. In the spinal cord, producing general or local pain, or spasms in the body. In the vascular system of the body producing the general chill which precedes a fever, or local anæmia as in cold hands and feet, and what nervous patients describe as dead fingers. These and many other conditions have their origin in spasms of the arterial system shutting off the supply of blood to nervous centres or to parts of the body—they are similar in nature and call for similar remedies. They sometimes replace each other, and are beyond the control of the patient's will. The irregular circulation in the organs of the mind produced from excentric causes, is a subject well worthy the study of the theologian, the moralist and members of the legal profession whose mental philosophy studied from consciousness, seldom recognizes the groundwork of that science in physiology, hence it is with the one the wrongdoer is wicked, and the other condemns him as a criminal. How few recognize that great essential, "a sound mind in a sound body."

This is the explanation of the different views taken of cases in our criminal courts by the bench and the doctors. Let us continue at the risk of being the subjects of derision to testify when our conscience dictates, in the interests of mercy, and let the same understanding make us charitable toward all men. We are, however, seldom called to treat these cases until some unfortunate is ripe for the lunatic asylum, or on trial for his life.

We will now consider the nature and treatment of spasms affecting the bodily organs. The phenomena of a chill, is that a local or general irritation of the sympathetic causes spasms of the arterial coats and unstriped muscular fibres generally, shutting off the supply of blood to the skin producing a sensation of coldness and cutis anserina. The heart beats violently to overcome the obstruction. Paralysis soon follows the expenditure of nervous force, and the capil-

laries become distended with an overflow of blood which is the phenomenon of simple fever. Nature's object in this is to relieve a local congestion by withdrawing the blood to other parts of the body and thus equalize the circulation. All parts of the body now start from equal conditions to tone up their vessels, and if this process obtains equally throughout the body there is a continuous recovery; but if on the other hand the part primarily affected fails to keep pace with the rest of the body, after a certain time it is necessary to repeat the process, which probably is the cause of the periodicity of certain diseases, as intermittent fever, periodical pains, periodical drunkenness, or insanity of any kind. In low fevers the chills are slight, owing to the depressing or paralyzing influence of the poison, hence the dusky appearance of the skin, its sluggish circulation, and the bluish and long continued congestion remaining after the application of mustard, in typhoid fever, &c. The same conditions in the nervous centres, produce the sluggish comprehension and the nervous symptoms observed in fevers.

Convulsions frequently follow or take the place of chills, especially in children, a fact which proves their close relationship. Now what are the facts from which we can form a just conception of the nature of convulsions, and can we draw a comparison between them and chills? I think we can prove them to be identical. Let us observe closely the phenomena of a convulsion. 1st. There is variableness of the temper, fretfulness, excitement, frequently the child sings just before, and the joyous mother is suddenly transported into grief by the unexpected change. The face is observed to be alternately pale and flushed, irregular patches are seen, travelling spots of redness. The pupils alternately contract and dilate. There are frequent starts out of a restless sleep from dreams, rolling of the eyeball, twitches in different parts of the body precede the general convulsion which is unequally distributed, and generally follows a successive course over the body, repeated in the same order in each subsequent convulsion, sometimes affect-

ing only one side, which side is generally semi-paralyzed after the attack. Each convulsion is followed by a state of congestion of the face, and more or less profound unconsciousness. Now what is the signification of these phenomena—doubtless they are the result of irregular circulation produced as in chills, by irritation of the sympathetic and irregular contractions of the vessels until the maximum contraction is reached in the convulsion, which is followed by dilation of all the vessels, and congestion of the nerve centers, which is the cause of the unconsciousness, and of the cessation of the spasmodic action. Excessive hemorrhage produces convulsions, owing to a deficiency of blood supply, fainting fits are frequently accompanied by or pass into convulsive movements. The object here to be attained by nature is, by the temporary spasm of vessels leading to the nervous system, to paralyze those vessels in order that while the body which may remain prostrate without a fatal result, those parts which are necessary to life, may be more abundantly supplied until the vital fluid is replenished. Farther with a view of testing these ideas I have observed in the slaughter house that spasms occurred in the animals only when they were nearly bled out, and I further caused two calves which I selected as nearly equal as possible, one to be suspended by the legs and the other laid on the floor with its head elevated, they were both bled as nearly alike as possible, and as I anticipated the one on the floor was convulsed much sooner and much more than the one suspended, showing that while anæmia favors, congestion of the brain opposes, general convulsive movements. Again, compression of the veins of the neck is said to control a convulsion; however, I have not met with success through inefficient performance as it is scarcely practicable in the presence of friends. The exciting stage of anæsthetics appears to be of the nature of a convulsion and the second stage resembles the congestion subsequent to it. This is probably the action of these drugs on the body and their use in convulsions by keeping the vessels in a state of

paralysis. If these conceptions of the nature of convulsions are correct it follows that beside removing the cause, if possible, they may be controlled by such remedies as either produce tone in the primary part at fault by very *small* and *repeated* doses of some medicine acting *directly* on that part, or by a large dose of some medicine sufficient to cause paralysis of the whole vascular system. Unfortunately it is difficult to make a correct diagnosis of the cause, or in the present state of our knowledge of materia medica exactly to adopt a medicine to use in this manner. Again, we are seldom called until the spasms are developed, consequently we are obliged to adopt those measures which give relief speedily to the urgent symptoms. The latter course is one which we may adopt with almost certain success, and as is seen in a study of the disease, it is not contrary to the efforts of nature herself, hence the use of anodynes and anasthetics is appropriate in doses sufficiently large to produce paralysis of the cerebral vessels and congestion.

Of the use of chloroform, chloral, bromide of potassium, warm baths, bleeding, &c. we are all acquainted. Perhaps nitrate of amyl might be useful on the same principle. I have no experience, but it appears to produce cerebral congestion very quickly, I think that it deserves a trial. Of all remedies I am most in favor of opium, and so much confidence have I in this remedy, which I have used for six years, that I rarely think of anything but my hypodermic syringe when I am called to a case of convulsions. The few unsuccessful cases which I have had, have not shaken my confidence in this remedy. I introduce the hypodermic syringe, loaded with three or four doses, and slowly inject at intervals of twenty minutes or $\frac{1}{2}$ hours, until the pupil begins to contract. As soon as I find the pupil contracted I go home, confident that the spasms have ceased, at least until the influence of the medicine has passed. I have adopted this treatment in infants two or three months old with perfect success, and without any mishap. If infants.

are more susceptible to opiates, they require less, and of course the treatment is not responsible for a want of caution. I have observed that if the pupil failed to contract after a reasonable dose of the opiate, the case is unfavourable, and in six cases which occurred to me, all died either from recurring convulsions or of meningitis, and here it may be objected that the opiate was contra-indicated in, or might produce inflammation of the brain, or meninges, but I am of a different opinion, and that opium is no more contra-indicated than any of the above named remedies, except perhaps the warm bath and bleeding, since the others produce the same result as the opium or the fit itself viz. congestion of the cerebral vessels. I think for certain reasons that cerebral difficulty is already established in those cases where the pupil refuses to contract, and from observation on a recent case, and a successful one which I saw before, I believe that leeches should be employed at once in cases of this kind.

Let me say a word about removing the cause. I think we should not be in too great a hurry. I have known a child to be in imminent danger of strangulation after an emetic, by vomiting while in a fit and drawing a piece of apple into the larynx during an inspiration; also to purgatives I am strongly opposed as adding another irritation to that already existing. I never give a purgative in threatened convulsions without first administering an opiate in order to leave room for the additional irritation.

It remains to say a few words about puerperal convulsions. Do they differ in their nature from other convulsions? I believe that they do not only in this; that we know their cause to be congestion of the kidney, and since the kidney is so important an organ, when its functions are disturbed nature makes most strenuous efforts for relief. The same remedies on the same principle are useful in these as in other convulsions. I have injected morphia in $\frac{1}{2}$ grain doses while the patient was in the convulsion and also during the stertor that followed with uniform benefit, in

all preventing a recurrence for several hours. One case died on the third day. She was convulsed before labor began and was unconscious for the most part until she died. The urine became semi-solid on boiling and remained so during the whole period.

I saw one case where *veratrum viride* appeared to produce a very decided effect. This case occurred in the Lying-in Hospital during my studentship, about twelve years since. It was under the care of the late Dr. Hall. The convulsions in this case occurred at intervals of about 20 minutes and had lasted about twenty-four hours. Chloroform had been administered without much apparent benefit, and the case was considered hopeless,—such was the word sent to her friends. It was observed that just before a convulsion the pulse rapidly rose to 140 or more, and fell after the spasm had ceased, it occurred to us that if the pulse was reduced it might be some benefit; so considering that the girl was of a robust constitution, and that it might be some time before the Doctor returned, we took it upon ourselves to prescribe. Accordingly, we gave 4 drops of the fluid extract of *veratrum viride*, and two more in half an hour. The pulse was reduced to about 80, and I think it was about an hour when the spasm, ceased and did not return. The girl made a steady and good recovery, which under the circumstances was attributed to chloroform. My impression at the time was that the medicine lessened the flow of blood to the head by diminishing the force of the circulation, but I think now, that like *nausients*, it diminished the arterial tension, by paralyzing the unstriped muscular fibres, and favoured passive congestion. I am not inclined to believe in the *uræmic* theory of puerperal convulsions, not only from the action of the medicines in general use in these cases, but from the fact that they are relieved by bleeding, since the blood which remains in the vessels surely possesses the same proportion of the poison; and, as for the theory, that the difficulty is due to carbonate of ammonia, I may state that I have injected that salt into a vein without giving rise to any symptoms whatever.

My friend Dr. Duckett, of St. Joseph street, related to me a case where the bromide of potassium appeared to intercept the convulsion. The woman was one of four sisters, all of whom, as well as herself and her mother had convulsions with every child. She was put upon fifteen grain doses of the bromide of potassium, three times a day, and when labor began, as she evinced the symptoms which precede spasms, viz: headache, vertigo, imperfect vision and muscular twitches, he gave her three doses of thirty grs. each at intervals of one hour with complete relief of the symptoms, and she had no convulsion.

The bromide appeared to have no influence upon the labour. In a case of my own where there was a large quantity of albumen in the urine, and considerable œdema of the face and hands, for a month previous to the confinement, I gave ten grains of the bromide with a diuretic, three times a day for a week previous to labour with relief to the headache. No convulsions occurred. It has appeared to me from observations and enquiry that puerperal convulsions in very many instances is due to tight lacing. The mother as well as the daughters, in Dr. Duckett's cases, in whom the disease was considered to be hereditary, were all accustomed to tight lacing. The frequency with which convulsions are observed in primipara, and in unfortunate girls who naturally strive to conceal their condition tends to confirm this observation.

I will close by speaking of a condition which might be interesting to nervous surgeons and public speakers. Unconsciousness occurs in two opposite conditions of the vessels of the brain, viz., anæmia and congestion. A nervous person on attempting to act or speak is affected by a violent emotion which produces a spasm of the cerebral vessels, his heart beats violently, his face is pale, the index of the condition of his brain, and the words come forth slowly and with stammering, or he becomes confused and forgets entirely what he intended to say. It is not until symptoms of reaction set in, or as the popular phrase has

it, "until he gets warmed up," that fluency and ease is acquired. I have found a minute dose of morphia or a few whiffs of ether useful in this most embarrassing condition. Let me add the caution that two large a dose produces the opposite condition of the vessels quite as fatal to a successful result.

I dare say alcohol acts similarly on some constitutions.

I feel, in closing, that my limited experience prevents me from doing justice to the subject about which I have chosen to express a few ideas.

511 Wellington street.

TRANSLATIONS.

Asthma Dyspepticum.—(From a paper read before the Berlin Medical Society, Feb. 23, 1876, by PROF. HENOCK).

[The above name has been given to a peculiar form of asthma recently observed by Professor Henock. He relates the histories of several cases and appends such remarks as will, in his estimation, afford some explanation of their leading features.]

Case I.—Walter M., aged 9 months, recently weaned, has been fed upon cow's milk for the last ten days, has cut five incisor teeth; with the exception of a tendency to costiveness has always been healthy. On the 21st of March, 1875, shortly after drinking some milk mixed with an equal quantity of water, he was attacked with vomiting, which was repeated on the 22nd every time milk was taken. The bowels had not moved since the previous day, the child appeared somewhat emaciated, cried a good deal and was so restless that a careful examination could not be made, the respiration was rather increased in frequency; after a few half grain doses of calomel three green stools were evacuated. On the morning of the 23rd the vomiting had ceased but there was a great change in the child's appearance;

the countenance wore an anxious expression, the respiration was quick and without rhythm, the pulse small and difficult to count, the skin pale, the lips cyanotic, and there was complete apathy.

I now saw the child for the first time. Repeated examinations of the thorax did not reveal the slightest sign of disease either of the lungs or heart. Being unable to establish a diagnosis it was agreed to envelope the thorax, and abdomen as far as the umbilicus, in hydropathic packing in order to dilate the cutaneous capillaries, and to sustain the heart's action with Camphor and Benzoin given in doses of $\frac{1}{4}$ grain each every 2nd hour.

Notwithstanding these measures the symptoms all increased in severity, the collapse and cyanosis became more marked, the respiration was about 60 per minute and the dyspnoea was attended with characteristic movements of the *alae nasi* and the muscles of the neck, the extremities were cold. At midnight the pulse was imperceptible and the breathing began to be irregular; death seemed imminent and as a last resort ten dry cups were placed upon the thorax, whilst they were being applied the child became quieter, then fell asleep and breathed more regularly; after the lapse of another half hour irregularity of respiration was again noticed and the cups were reapplied. Hungarian wine and broth were also given in teaspoonful doses and retained, although previously every form of nourishment had invariably been rejected. At 6. a.m., of the 24th the respiration had diminished from 60 to 35, the temperature of the entire body was uniform, but the pulse could not yet be counted. At 10 a.m., we again examined the child in consultation with Prof. Traube, but without arriving at any positive result, though the epigastric region seemed somewhat sensitive to pressure.

No evacuation of the bowels had occurred during the last twenty-four hours. After a bath sleep ensued, the skin became moister and the countenance less apathetic.

25th. Temperature somewhat increased, pulse 118,

distinctly perceptible, cyanosis gone. There has been another green stool.

26th.—Pulse 108; respirations 24. Urine abundant. No albumen. Skin moist with perspiration during the night. Face, right hand, and right foot slightly œdematous, (the child lay for the most part upon this side.) A lower incisor tooth has made its appearance.

27th.—Seems quite well.

April 5th.—A similar but slighter attack occurred, which, however, rapidly yielded to a renewed application of four dry cups.

We could not then agree as to the cause of the severe symptoms which the case presented. Notwithstanding the negative result of the examination, I was inclined to believe in the existence of some affection of the circulatory apparatus; but Traube, who indeed saw the child for the first time after it had commenced to recover, attributed all the symptoms to a reflex irritation proceeding from the stomach and based his arguments upon the experiments of S. Meyer and Pribram, reported in the "Juliheft der Wiener. Accademie der Wissench. 1872."

These experimenters irritated the stomachs of dogs and cats by means of electricity, heat and chemical irritants, and thus caused diminished frequency of the pulse, and increased arterial tension. They considered these phenomena due to a reflex excitement of the inhibitory fibres of the vagus, and of the vaso-motor nerves. Although these reflex symptoms only occurred when both muscular and mucous coats of the stomach were irritated, it is easy to conceive that if, as in the above case, the irritation were intense, similar results might ensue though the mucous coat alone were affected. Traube's explanation of the symptoms was as follows:—Reflex irritation proceeding from the stomach caused contraction of the smaller arteries, hence the coldness of the extremities, imperceptible pulse, excess of blood in the venous system and right heart, accumulation of carbonic acid in the blood, and consequent dyspnoea and cyanosis.

This ingenious theory can only be accepted in explanation of the above case, by regarding the antecedent vomiting as the sole cause of the irritation of the stomach: Nor does the speedy relief afforded by the dry cups harmonize with the same, for they must be admitted to have caused a salutary revulsion of blood from the over-filled lungs. Moreover, the fact that an additional tooth made its appearance immediately after the symptoms had subsided might raise a doubt, in some minds, as to whether teething should not be regarded as the real, or at least, as an exciting cause of the outbreak.

Thus there remained some doubt as to the nature of the phenomena above described, until a few months later, the following case came under my observation, and revealed much more clearly than the preceding, that the irritation of the stomach will account for all the symptoms described.

Case II.—On May 10th, 1875, a girl *æt.* 9, was brought to the Charité out-door department, in the following condition :

The face was pinched and anxious-looking, and together with the mucous membrane of the nose and mouth was slightly cyanosed. There was excessive dyspnoea, but the respiratory movements of the thorax were exceedingly shallow and amounted to 70 per minute, at the same time expiration was attended with a moaning sound; the pulse was 108, and very small, and the case seemed altogether so serious that we heard with astonishment the child had walked a considerable distance with her mother to the hospital. The symptoms became more and more urgent, but after several carefully conducted examinations of the thorax we were unable to discover any trace of disease of its contained viscera.

The child complained of shortness of breath, and weakness, headache, and soreness in the epigastric region, which was slightly fuller than normal, tympanitic, and decidedly tender on pressure. From the history of the case we only learned that she had been well until the previous

evening when she began to complain of pain in the stomach. Passed a very restless night, and in the morning the cyanosis and dyspnœa made their appearance. The complete absence of any physical signs pointing to disease of the thoracic viscera was all the more striking from the fact that all the other symptoms seemed to indicate œdema of the lungs, or a large pericardial effusion, which however certainly did not exist. On the other hand, the epigastric fullness and tenderness on pressure pointed the stomach as the seat of the disease. Taking into consideration the apparently grave state of affairs and the absence of any obvious cause, I determined not to take active measures, but order small doses of morphia and await results. The opium, however, was not administered, for the child had scarcely reached home when violent vomiting came on and recurred at intervals till evening. The contents of the stomach, thus evacuated, consisted of the remains of food, including some large pieces of undigested egg. This led to the discovery that on the previous day the child had over-exerted herself in running about the city, and had subsequently bolted a hard boiled egg. A quiet slumber followed the removal of these ingesta and upon awakening the child was well.

This case has for me the significance of a physiological experiment, and is the more valuable from the fact that the subject of it was a human being, and not one of the lower animals. We see here a whole series of phenomena produced by irritation of the stomach, from the presence of undigested food, disappear like magic after removal of the irritating material. Again the dyspnœa, frequent and shallow respiration, small pulse, and cold extremities, led me to infer some grave affection of the heart or lungs, but again a careful examination of these organs failed to reveal any abnormality. Although the headache and epigastric tenderness, should have aroused my suspicion as to the the real seat of the difficulty, both these symptoms were so slight in comparison to the dyspnœa, that I may be excused for having overlooked them. Mechanical compression of the

thoracic viscera was excluded by the undoubtedly normal position of the diaphragm; hence the phenomena mentioned, could only be ascribed to the agency of the nervous system, and the explanation given by Traube, based upon the experiments of Mayer and Pribram, may be accepted for this case. In support of this view may be adduced the liability of dyspeptic children to convulsions, in consequence of indigestion, which are obviously the effect of anæmia of the brain from reflex spasm of the cerebral arteries resulting from the gastric irritation. I have also seen syncope, coldness of the extremities, collapsus faciei &c., caused by the presence of a tapeworm in the intestines of a child, and explicable on the same hypothesis.

The question now arises whether in addition to the results obtained by experiment there may not be other causes capable of inducing gastric irritation on the one hand and disturbance in the function of respiration on the other. Without entering upon any discussion concerning the "Tussis Stomachica" of the older authors I may mention the case of a boy already reported in my "essays on diseases of children" in the year 1868 (Neue Folge. Pag. 314.) This case was one of fermentative dyspepsia, cured by the use of kreasote, and in which dyspnoea accelerated respiratory movements, and panting expiration were the chief features without, however, any signs indicating spasm of the blood vessels. To be borne in mind also, are those by no means rare cases of dyspepsia attended with a peculiar feeling of oppression and an irresistible desire to take a deep inspiration which, nevertheless fails to afford relief for a time, though the attack usually ends with such an inspiration or with repeated yawning. Possibly we may have here to do with a reflex action implicating the vagus, for under similar circumstances there is often intermittent action of the heart.

But to return from this digression to the subject of our remarks. I am inclined to think cases similar to those I have related are by no means rare although the current literature of "hepatico-gastric affections" does not mention

them. In addition to the cases already described I have had the opportunity of observing two others.

Case 3. Marie L. *æt.* 3 months was brought to the hospital, Feb. 3, 1875, that is, before the one first described. On looking over my case book I was struck by its resemblance to the latter, although the symptoms were less characteristic. The child was being brought up by hand and had always been healthy, but for the last three days the bowels had not moved. During the last night breathing became embarrassed and towards morning convulsions occurred. I found cyanosis, shallow respiration (50-60 per minute) a small rapid pulse, cold hands and feet and a moderately distended abdomen. Examination of the thorax revealed no abnormality and there was no cough, but the appetite had failed entirely since the previous day. I ordered a teaspoonful of Syrup. Spin. Cervin. (Buckthorn) to be taken every two hours which caused a free action of the bowels, and on the following day the child was well.

Case 4. On the 9th of January a boy 9 years old was brought to the hospital by his mother who said he had been treated at another hospital for "disease of the heart" two years previously. For six days he had been suffering from pain in the epigastric region which was somewhat prominent and sensitive to pressure; but the most striking symptoms were, the quick and shallow respiration (over 50 per minute) the slightly cyanotic tinge of the face and lips, and the small and frequent pulse (120 or more to the minute); coldness of the extremities was of doubtful import, because the boy had just come in from the cold air. The physical signs showed the lungs to be healthy but the apex beat of heart was found to alternate between the fourth and fifth intercostal spaces and at the same time the first tone was accompanied by a slight blowing murmur whilst the second pulmonic sound appeared to be abnormally distinct. The præcordial dullness extended beyond the right sternal margin. In addition to these signs of mitral insufficiency and enlargement of the right ventricle, the tongue was

thickly coated and the breath foetid. An emetic was administered and on the following day all signs of disease had disappeared with the exception of those connected with the mitral insufficiency.

I venture to think the records of these cases suffice to show a direct dependence of the phenomena which they presented upon an irritated condition of the stomach, and therefore hold that the term "Asthma dyspepticum" is a suitable designation for them. An attentive observation will doubtless increase the list of such cases and they will probably be found to occur most frequently in city practice.

F. B.

Dr. Ortille.—Treatment of Convulsions in children by Anæsthetics.—(Bull. de Thérap. quoted in Schmidt's Jahrbucher No .1. 1876.

Half of the cases of convulsions during childhood run a favourable course, rarely does an attack lead to death. As a rule they depend upon dentition, and are accompanied by constipation, In other cases transitory affections of the digestive tract, indigestion, or the presence of worms, are the cause. These last, however, do not always end favourably, but death results from the intensity of the attack, from asphyxia, or from congestion of the nerve centres, which the author regards as primary not secondary. A cerebro-spinal irritation is always the predisposing factor ; it leads to hyperæmia, turgescence, and swelling, causing considerable tension of the congested parts, and finally to a greater or less degree of compression of the brain substance, with elevation of the temperature.

As a reaction to this compression a convulsive attack follows, whose determining cause is also the congestion.

The author compares these processes with those in partial or general hypertrophy of the brain, and dropsy of the ventricles, which also, by compression of the brain substance, lead to convulsions. On this account he regards those remedies as most effective which in any way produce

anæmia of the brain—energetic derivatives, cold, anæsthetics. The last named remedies weaken the activity of the ganglion cells, lessen the determination of blood, and produce a reduction of the congestion by causing contraction of the blood vessels, and in consequence anæmia of the brain, and sleep. As authorities the author quotes Durham, Bertui, Donders Claude Bernard and Hammond.

In this employment copious, almost critical, perspirations supervene, which decide upon the course. Anæsthetics are recommended particularly in the severe cases in which a fatal ending is feared; in such the physician must do everything to produce anæmia of the brain, and should not fear to change quickly the remedies in order to relieve the congestion.

The principal remedies which the author employs instead of derivatives, purgatives, and cold are, (1) the compression of the carotids, and (1) chloral hydrate and chloroform. A report of 6 cases follows, in the first of which compression of the carotids, in a girl 6 years of age relieved within 2-4 a convulsive attack of over two hours' duration. He uses the caution to continue the compression for a short time after the cessation of the attack. Six months later the same child was again attacked and compression of the carotids did not succeed, the child had become so fat; 3ss of chloral hydrate was given, but the attacks increased; finally with chloroform they were controlled within 5 minutes. In other cases the author speaks favourably of chloral in 15 gr doses. In the same connection he speaks of the convulsions occurring in the course of organic kidney disease, and as a consequence of the congestion induced by pregnancy. The predisposing cause of the convulsions is here also cerebral irritation, caused by the altered condition of the blood: the determining cause however, is always the compression of the nerve centres, by the congestion, in an unyielding cavity, which leads to dropsy of the ventricles, or œdema of the brain or its membranes. In such cases the compression (of the carotids) must be continued for a much longer period as the cause disappears slowly.

W. O.

Oxygen as an Antidote to Poisoning by Phosphorus.

Köhler and other Germans have pointed out the fact that fresh rectified oil of turpentine does not act so efficiently as an antidote to phosphorus as the ordinary article which

has been kept for a length of time, this difference being due to a larger amount of oxygen contained in the latter. In consequence of this observation, Thiernesse and Casse were led to make experiments for the purpose of ascertaining whether oxygen alone would not act as an antidote. They gave phosphorus to a considerable number of dogs, in sufficiently large doses to produce its fatal effects; and when the symptoms of poisoning became pronounced, injected oxygen gas into the saphena vein in large quantities—up to 800 c.m. Of twenty-two experiments the results in nineteen were favourable; the animals did not die from the poison. These experimenters are therefore of opinion that oxygen gas introduced into the veins in large quantities counteracts poisoning by phosphorus, and that the antidotal effects of oil of turpentine can only be ascribed to the oxygen it contains.

Oxygen gas like common air may be freely injected into the veins, without danger, *provided it be done slowly.*

The Ætiology of Angina Pectoris.

According to G. See, (France Med., No. 26, et Seq. 1876.) Angina Pectoris is never a simple neurosis but always depends upon ischæmia of the heart. As causes of this condition are to be reckoned; 1st. mechanical alterations of the coronary arteries, degeneration of the muscular tissue of the heart and dilatation of its cavities, in consequence of which the coronary arteries are unable to carry a sufficient supply of blood to the heart.

2nd. A condition more rarely met with, in which the affections of the coronary arteries is purely functional, and may be caused by smoking, hysteria, &c. In the great majority of instances an actual organic lesion exists. Sée thinks all the symptoms of an attack of angina can be explained by this ischæmia, which is also in his opinion, the cause of death.

Deficient supply of blood to the myocardium, and the terminal filaments of the vagus contained therein gives rise both to the pain and to the feeling of suffocation. This irritation of the sensory nerves induces a reflex excitement of the inhibitory motor fibres of the vagus thus causing the pulse to become slower, and giving rise to interruption of the heart's action towards the end of the attack; lastly the vagus becomes exhausted and the heart again contracts rapidly.

The radiation of pain towards the shoulders, arms, and

other parts of the body is due to transference of painful impressions from the sensory filaments of the pneumo-gastrics to those of other nerves.

The palliative measures to be employed are during the the attack, hypodermic injections of morphia, or enemata, containing 30-45 grains of chloral hydrate. Some cases have been relieved by spiritus mindereri, in doses of ʒii to ʒiii, with an equal quantity of water.

Sée has had no experience of Amyl Nitrite in these cases.

During the intervals he recommends bromide of potassium, alternated with digitalis. The patient should live quietly and temperately, avoiding tobacco, tea, and coffee entirely but a small quantity of alcoholic liquors may be allowed.

F. B.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE
MONTREAL GENERAL HOSPITAL.

Excavation of the whole of one Lung in a case of Phthisis.

Under the care of Dr. REDDY. Reported by J. D.

CLINE, B.A., M.D.

William Skinner, æt. 41, was admitted into the General Hospital in March 1876. He had been a patient in the hospital several times in the last three or four years. On admission the disease was evidently in a very advanced stage. His voice was very husky, and scarcely louder than a whisper. He suffered great pain in swallowing, so much so that he could not take anything solid. The expectoration was purulent and very profuse, and brought up with great difficulty, and exhaustion. In the right lung there was blowing, breathing, and gurgling in all the regions. In the left the breathing was amphoric, most distinctly so in the infra-clavicular region in front, and at the root of the lung behind. The percussion note over this lung was not amphoric; not the note which resembles that of pneumothorax,

though very hollow. The patient died about the 10th of April.

Autopsy 36 hours after death.—The body was extremely emaciated. The right lung was filled with cavities of all sizes up to one in the apex nearly as large as the fist. There were no pleuritic adhesions on this side, except at the extreme apex. Some of the cavities were quite superficial, the outer wall being formed by the pleura only, the yellow purulent matter showing through it. On the left side there was no lung tissue, except a small piece at the base in front, about two inches long by an inch and a half thick, which crepitated slightly. The rest was one immense cavity. The pleura was firmly adherent all around, and as it was detached carefully it collapsed like the flaccid walls of a large bladder. The capacity of this cavity was 42 ounces. The walls were thin, consisting of the pleura only, except in the situation above mentioned. The inside was almost dry, and traversed by numerous trabeculæ, which represented the thickened vessels, and some bronchi. The large bronchi were ulcerated to a level with the walls.

The larynx was extensively ulcerated. The epiglottis was thickened and rough on its outer surface, margin and base of inner surface. The vocal chords were much thickened. The whole of the arytenoid cartilages except their bases, were exposed and rough, being in a small cavity which had ulcerated around them; and the true vocal chord on the the right side was separated from its attachment to the arytenoid cartilage by a deep notch of ulceration. The kidneys and liver were slightly amyloid, the latter appearing to be fatty also. The spleen was very large and amyloid. The amyloid disease was very prettily shown in the intestines, by the characteristic dark brown color produced by iodine, tracing out the course of the small vessels.

I have never seen recorded a specimen of such extensive excavation. The length of time that this man lived with the small amount of respiratory surface which was found in these lungs, is also interesting and marvellous.

Reviews and Notices of Books.

A Treatise on Surgery, its Principles and Practice.—
By T. HOLMES, M.A., Cantab: Surgeon to St. George's Hospital, &c.; with four hundred and eleven illustrations, chiefly by Mr. Westmacott. 8 vo., pp. 960. Philadelphia: Henry C. Lea, 1876.

The author of this treatise is well known as the editor of the large work in five volumes entitled "A System of Surgery by various authors." He has also given us a very excellent treatise on the surgical diseases of children, which is notable for the clearness, accuracy and elegance of its composition. When it was announced that Mr. Holmes was preparing for the press a treatise on surgery, we looked forward to its publication with great interest as we felt certain that it would be a fair exponent of British surgery given in that pleasing style which characterised his former productions, nor were we disappointed when we received a copy of the English edition. The copy before us is a reprint from the publishing house of Henry C. Lea of Philadelphia. The author in his preface states that he intended "this book to be to some extent an introduction to the more elaborate system of surgery of which I am the editor," and it may be observed that the author quotes from that treatise to some extent, at the same time it will be seen that there is throughout the work evidence of personal observation and experience so that the writing is no servile copy either in text or teaching of the former treatise. The author has certainly succeeded in giving a highly practical account of surgical injuries, and diseases.

The work is divided into forty-four chapters. In the first five we have considered the subject of inflammation, the process of union of wounds, complications of wounds and injuries, poison wounds, hemorrhage and collapse, burns and scalds. In the section on the mode of dressing wounds the author gives a description of the antiseptic method and he states his strong conviction of the beneficial results of that method

of treating wounds, in saying this he does not declare his adhesion to the "germ theory of disease" but remarks that by adopting the method advocated by Mr. Lister greater care in the dressing of wounds is adopted either by the surgeon himself or his assistant. This may be considered the great secret of the success of the antiseptic method of dressing wounds. In the chapter on hemorrhage the author gives a very clear description of the various means employed by the surgeon to restrain the bleeding in wounded vessels. The use of the carbolic catgut ligature is discussed and he proves by one case at least that the employment of this means is capable of obstructing the vessel without actual division of its coats, he fully recognises however that this is not attainable in every case and remarks that if it were so secondary hemorrhage would be unknown. In giving his own experience of the use of the carbolised catgut ligature he states that the "constant use of this form of ligature in operations of all kinds for several years has convinced me that secondary hemorrhage is far rarer than with the silk ligature, even in wounds which suppurate freely," and furthermore that the presence of the ligature itself does not interfere with the process of primary union, nor does it act as a foreign body. This is certainly very convincing evidence and one which we can fully endorse so far as our limited experience goes for although we have not, so far, ligated large vessels with the carbolised gut, we have on numerous occasions resorted to its employment and always with perfect results.

In this chapter the author gives a full description, after Pirrie, of acupressure and compares that method with an older method, or torsion. In expressing an opinion on both the relative value of these methods he remarks that acupressure and torsion are perfectly reliable methods of arresting hemorrhage but as a matter of private opinion he states that neither of them appear to be so convenient, so safe or so likely to promote the rapid union of a wound as the carbolised ligature. The chapter on burns and scalds

is short but sufficiently full for a work of this character, the author adopts the classification of Dupuytren; to this chapter is appended a short description of lightning stroke, which according to our author occasions "injuries which are the combined effect of electric shock, mechanical concussion and burn."

In chapter six we have considered the general pathology of fractures and dislocations, and also the process of union in the hard parts, after which the author passes on to individual injuries, commencing with those of the head and spine, and face, injuries of the neck, of the chest, abdomen and pelvis, of the upper and lower extremities. These latter are particularly full, and are amply illustrated, especially fractures of the cervix femoris, there are also given some illustrations after Biglow, of dislocations of the hip joint.

The chapter on gun shot wounds includes injuries of the head, chest, abdomen and extremities. In this chapter the comparative results of excisions, of the knee and hip, and shoulder and elbow joints are referred to, and he remarks that the two latter operations were brought into general acceptance in this form of injury, mainly in consequence of their success, in warfare, while excisions of the knee and hip, although they have sometimes succeeded in war, can count very few successes. This well-known fact leads to a marked distinction in the surgery of gun shot wounds of the upper and lower extremities.

The subject of Tumours the author divides into two well marked classes, firstly, what are termed *homologous*, in which the growth resembles, in exactness, anatomically, some tissue of the body. These increase in size, displace structures but do not invade them; clinically they are otherwise called benign or innocent. Secondly those which do not present any resemblance to the normal tissue in which they are situated, and hence are called *heterologous*. Clinically, this class show a tendency to ulcerate, invade all structures and influence the general health. Tumours of this kind are

malignant. But besides these two classes which, in well marked examples are easily recognized, a third class is constantly seen, which clinically and anatomically belongs to neither division, to these the author has allotted the term *sarcoma*, a term revived by the modern German school, and which is used to designate a growth or tumour whose structures present some resemblance to the rudimentary forms of some natural tissue of the body. The illustrations in this chapter are very clear and good. Scrofula receives separate consideration, in this the author describes the subject of tubercle, its kinds, manner of formation, and connection between it and ordinary inflammation.

Hysteria is the next on the role, at first sight a novel subject to be found discussed in a surgical treatise, but here our author goes into the question of nervous mimicry and nervous affections generally, which may to a considerable extent bother the surgeon. Space will not permit our discussing each chapter as it comes before us. Those on diseases of the bones, joints, and diseases of the arteries, are very clear, and contain a vast amount of accurate and reliable information. The illustrations are particularly good, nearly all of them being from preparations in St. George's Hospital Museum. Amongst the illustrations we observe several thermographs, one of traumatic fever, one of pyæmia, one of hectic fever, of erysipelas, and one of tetanus. There is a table of contents and list of illustrations, but we regret to notice that in the American edition the publisher has omitted marginal notes which form a distinguishing feature of the original work. We with confidence recommend this work to the profession as being one of the best text books that has issued from the press.

A manual of minor Surgery and Bandaging. BY CHRISTOPHER HEATH, F.R.C.S. Surgeon to University College Hospital, and Holme Professor of Clinical Surgery to University College, London, &c. Fifth edition, 8vo : pp. 308. Philadelphia ; Lindsay & Blakiston, 1875.

This little work may be regarded as an indispensable adjunct to the library of all young surgeons, and even those of more advanced years may benefit by its practical teaching, more especially when from circumstances they have

lacked the opportunities enjoyed by the fortunate few who have held the responsible though valuable post of resident surgeon to an hospital.

In the introduction the author makes some admirable remarks on the relations between the house surgeon of an hospital and the other officials, and also on his duties to the patients under his charge, and to the public. Having himself been House Surgeon at Kings College Hospital, Mr. Heath speaks with authority, pointing out the various difficulties of the position, which however can be readily overcome, by care and attention, and a proper appreciation of what is due to himself and others.

The work consists of thirteen chapters, and in all of them will be found practical directions for the treatment of surgical diseases and injuries. In chapter 1st, is discussed the subject of hæmorrhage, in which will be found many practical suggestions, not to be met with in the larger works on Surgery. There are in this chapter specific directions, short, concise, and to the point, how to treat scalp wounds, wounds of the face, bleeding from the nose, cut throat, ruptured frænum, bitten tongue, stabs, cuts, wounds of the palmar arch, wounds of veins, etc., and towards the close of this chapter the various methods employed for the arrest of hæmorrhage, as pressure, the tourniquet, forceps, ligatures, etc., and also the methods of tying, acupressure and torsion.

There is a good chapter on various surgical operations, such as the house surgeon of an hospital is sometimes called upon to perform, but the author points out the necessity for weighing well the question of urgency of the case, lest the house surgeon should come in collision with the attending surgeon. As the author very correctly remarks, "Some visiting surgeons wish to do everything themselves, and are very wroth if a house surgeon has opened an abscess or tightened a bandage." To this we may observe that a certain degree of latitude should be accorded to the house surgeon of a hospital; and, further-

more, the attending surgeon should bear in mind that his subordinate officer is there to use his own judgment, and if he does things well, deserves credit rather than censure.

There is a good chapter on bandaging, and throughout will be found specific directions, with good illustrations of the method of applying surgical apparatus. The work is illustrated with eighty-six wood cuts. There is a chapter on case-taking; also one on post mortem examinations, at the close of which is a table of the average weights of the various organs of the body. The work is addressed throughout to house surgeons of hospitals, but although it affords to gentlemen occupying those responsible posts most important and valuable information, its teaching will be found of use to all.

Periscope Department.

MEDICINE.

Some Remarks on Whooping-Cough and its Treatment by Carbolic Acid Inhalations.—By SAMUEL LEE, M.R.C.S.

Before alluding to the treatment of whooping-cough by inhalation, we may with advantage consider what means we have at our disposal in retarding the spread of the malady. It is apparent that, in a considerable majority of cases, no precautions likely to lead to the desired result are adopted; and at first sight it appears somewhat surprising that isolation of patients suffering from scarlet-fever, small-pox, and enteric fever, should be strongly advocated, and in many instances enforced, when the victims of pertussis, which may be looked upon as one of the most fatal diseases to which children are liable, are submitted, as a rule, to no such restraint. There is reason to believe that the isolation of patients in a special ward in some of our hospitals,

both in London and the provinces, would be beneficial. In a former number of the *British Medical Journal*, we were favoured with an interesting communication from Mr. Richard Harrison, of H.M. Convict Prison, Dartmoor, on the treatment by carbolic acid inhalations; and the general conclusion arrived at was that, in the majority of cases so treated, considerable relief to the more urgent symptoms was the result. The inhalation of the acid may be conducted in two ways, either by long-continued inhalations of a weak solution, or by strong inhalations three or four times a day. For this purpose, I have used the steam-draught inhaler, by means of which, owing to the free admixture of fresh air with the vapour to be respired, the inhalations can be prolonged for several hours; and, there being no effort of inspiration, one of the main difficulties in obtaining the desired result in young children is overcome. In cases complicated with obstruction of the bronchial tubes with mucus secretion, a stimulating inhalation will sometimes excite spasmodic contraction and expulsion of the offending material. I have used the carbolic acid inhalations in the mild and severe forms of the disease, and in both with considerable relief. In three cases that have come under my notice in adults, in one of which the malady had continued in spite of all treatment for eight months, attended with hæmoptysis and severe and frequent attacks of coughing, the relief obtained by inhalation of the acid was very marked. I hope on a future occasion to be able to communicate to the *Journal* a report of cases treated by the above method.—*British Medical Journal*.

On treatment of Convulsions in Infants.

Mons. Blanchet, in a lecture on diseases of children, in the *Medical Times and Gazette*, lays down the following rule for the treatment of convulsions. If it be a single attack, and gives no signs of a tendency to recur, it is best to confine ourselves to some hygienic precautions, such as secur-

ing efficient ventilation, etc. If the attacks run into each other, or recur at short intervals, revulsives should be applied to the lower extremities, compresses of cold water, or of water with ether, being also laid on the temples. Compression may at the same time be made on the carotid arteries, as recommended by Trousseau. The pulsation of these vessels must be sought for at the lateral part of the neck, and then they must be gradually compressed backward toward the spinal column. The amelioration should be rapid; and if after two or three minutes it has not manifested itself in an evident manner, the compression should not be longer continued. Inhalations of chloroform may then be resorted to, administering them in a very gentle and gradual manner. In order to avoid all danger, slight as this is, it is necessary that a certain quantity of air should be always mixed with the chloroform vapours. In some cases special indications present themselves, as for the employment of an emetic when it is well made out that the convulsions are due to indigestion. When the attack has been overcome, we must try to modify the general eclamptic condition by having recourse to anti-spasmodic treatment; but the management of agents of this description requires great prudence, several of them being of a dangerous character. Their dose is of great importance. For an infant, from eight to fifteen months old, we should never exceed the dose of thirty centigrammes, after having commenced with five centigrammes. The maximum dose of belladonna powder is ten centigrammes, after commencing with one, increasing it very gradually, and carefully watching the throat and pupils of the child. We may proceed more boldly with oxide of zinc or James's powder (which M. Blanchez has not found of any special utility), of which ten centigrammes may be given every two hours; but bromide of potassium and chloral are to be preferred to any of these remedies. Of the bromide from ten to twenty centigrammes may be given every two hours, until fifty or sixty centigrammes are reached in an infant, and from two

to three grammes in a child of seven. The effect should be manifest at the end of twenty-four hours, or the dose should be increased. A mixed treatment of the bromide and chloral gives little better results, the bromide being given during the day and the chloral at night. The maximum dose of the latter agent is twenty-five centigrammes for an infant, and fifty for older children.—*Med. and Surg. Reporter.*

The Eucalyptus Globulus as a Cancer remedy.

The profession may well look with distrust on alleged "cancer cures," but the journalist must not omit to mention them. The latest is the famous *eucalyptus globulus*. The *Doctor* quotes six cases reported by Prof. Luton, of Reims, in the *Progres Medical*, all successful; and as Prof. Luton is a respectable practitioner, and the subject most interesting, we give them:—

The first case was that of a woman, 78 years of age, suffering from an encephaloid tumour of the breast, in whom the administration of the tincture of eucalyptus was followed by phlegmonous swelling of the tumour, erysipelatous redness of the surrounding skin, mortification of the tumour, and rapid falling off of the eschars, accompanied with fever, lassitude, anorexia, furred tongue, headache, and delirium. The cicatricial remains of the tumour had a keloid appearance, and represented the stroma of the original disease. In spite, however, of the continued use of the tincture, this mass subsequently increased in size, and began to assume some doubtful signs of malignancy, when Prof. Luton substituted the powdered leaves of the eucalyptus, one gramme daily, for the tincture, and after three or four days the same phenomena of death of the tumour occurred as on the first occasion. The patient is still under observation, and hopes are entertained by the Professor that the case will terminate in complete cure.

The second case was that of a woman, sixty-eight years of age, suffering from symptoms of cancer in the stomach for nine months, and a tumour in the abdomen as large as a turkey's egg, to the left of the epigastrium, and apparently attached to the surrounding parts. She was ordered ten grammes of the tincture of eucalyptus daily, with divers interruptions, during five months, and at the end of that time the tumour had become much smaller, isolated and more movable, less firm in consistence, and more sensible to pressure; and at the same time the patient had lost the cachectic appearance, and appeared in better health. During the interruption in the administration of the medicine, the patient's sufferings were increased, and a return to it produced a marked amelioration. She is still under observation.

The third case was that of a man, fifty-three years of age, suffering from a tumour in the right hypochondriac and epigastric regions, and presenting many of the subjective symptoms of cancer in the stomach. After three months treatment by the tincture of eucalyptus, ten grammes daily, the patient was much better, and the tumor had diminished in size and consistence. He is still under treatment.

The fourth case was that of a man, 52 years of age, suffering from cancer of the stomach for ten and a half months, and in a much worse condition than the two preceding. In fact, he was reduced to an incredible state of ematiation by the incessant black vomiting, and was almost moribund. Ten-gramme doses of the tincture of eucalyptus were administered, with great relief to the symptoms for a short time, but the vomiting soon returned, and could only be controlled by subcutaneous injections of sulphate of soda. The patient is still under observation, and Professor Luton considers that his life has been considerably prolonged by the treatment.

The fifth case was that of a woman, 45 years of age, suffering from excessive metrorrhagia, uncontrollable by the usual hæmostatics, with symptoms of cancer uteri in its

early stage. The hemorrhage was completely controlled in less than eight days by ten grammes of the tincture of eucalyptus daily. After the relief of the metrorrhagia, the woman would not submit to an examination, so that there is some doubt about this case.

The sixth case was that of an old gentleman, nearly 80 years of age, who had had an epithelial cancer removed, by the knife, from the root of the nose; but the disease subsequently returned, and attacked the nose and angle of the right eye, producing a large ulcerating tumor, which bled excessively. The first dose of the tincture of eucalyptus produced a sensible effect, and after a very few more the tumor perished and was thrown off, leaving a large excavation with healthy granulations. The process of reparation proceeded most favorably, and was almost completed at the time of publishing the case.—*Med. and Surg. Reporter.*

Treatment of Varicose Ulcers by the Tartrate of Iron and Potass.

Dr. Bourguignon having derived so much advantage from this substance in the treatment of phagedenic chancre, as recommended by Ricord, was induced to extend its application to chronic wounds in general, and especially to varicose ulcers of the leg with hard, well-defined edges and unhealthy surfaces. For the last ten years he has found these obstinate cases readily yield to this treatment, so as to become cured in two or three months. A solution of from two to six parts of the tartrate (according to the sensibility of the ulcer) is to be made in 100 of pure distilled water, a few drops of ammonia being added to prevent any precipitation. Pledgets of very fine charpie are to be soaked in it, and applied to the ulcer night and morning, and covered over with a thick layer of cerate, which must be so removed, with the aid of tepid water, as to leave none of the charpie sticking in the ulcer. After cicatrisation has commenced, the lotion may be applied only in the

evening, simple cerate being substituted in the morning. If the application is painful at first, opiate cerate may for a while be employed alternately. The tartrate is also a valuable remedy given internally, a mixture of four grammes in 150 of distilled water forming a valuable analeptic in chlorosis, chloro-anæmia complicated with gastralgia, and in dyspepsia, when solid preparations of iron, are not borne by the stomach. Given in doses of a tablespoonful before each meal, it much facilitates digestion. After a few weeks, more energetic ferruginous and stomachic preparations may be substituted.—*Union Méd.*, March 30.

Chloral Enemata in Infantile Convulsions.—M. Polaillon stated at the Paris Medical Society that encouraged by the benefit he had derived from chloral in puerperal convulsions, he had in two cases administered it with success to children as an enema (three grains in five drachms of water.) Calm sleep and a cessation of the convulsions followed, and a similar enema given 24 hours later completed the cure. M. de St. Germain believed chloral an eminently useful remedy in convulsive diseases, and related a case in which he had given it by the mouth to a child fourteen years old, the subject of tetanus, in doses increasing from three to twelve grammes per diem, the patient recovering on the seventeenth day. M. Blondeau had, with Trousseau, kept a child ten years of age under the influence of chloroform for twelve hours with success. M. Lolliot also prefers chloroform, and had kept a child three months of age under its influence during twenty-four hours. M. Lunier, in a case in which bromide of potassium had been used without effect, found that chloral arrested both the convulsions and the accompanying fever. He thinks that, carefully employed, it is preferable to chloroform, but that we must be cautious in giving large doses.—*Union Méd.*, March 23.

SURGERY.

Note on the treatment of Tetanus by Nerve-stretching. By
 GEORGE W. CALLENDER, F.R.S., Surgeon to St. Bartholomew's Hospital.

In a paper read before the Abernethian Society*, Mr Milner has advocated the treatment of tetanus by nerve-stretching, and in some observations on this operation upon nerve-trunks† I have expressed my regret, in narrating a case of tetanus, that the peroneal nerve was not exposed and stretched. Since this was written no case of traumatic tetanus has come under my care, but had the opportunity been given me I should certainly have planned an operation such as I have indicated, supposing, of course, that the nature of the case permitted me to stretch a nerve-trunk between the site of injury and the nerve-centres. I am glad to hear that quite recently M. Verneuil has had under his care in La Pitié a case which he will, I hope, shortly publish. A man had suffered from a severe crush of the hand, and, following this, showed the symptoms of tetanus. M. Verneuil exposed the median nerve at the elbow, and the ulnar at the wrist, and proceeded to exercise traction on them. The patient recovered completely.

I hope that this note may lead to a further trial of this method of treatment. The operation is not a severe one. The nerve is exposed and is stretched, when freed from its surroundings, by traction with an ordinary vulsellum, from its central connexions. No harm is likely to be sustained as a consequence. There is now abundant evidence, in the cases reported by Billroth, Nussbaum, and myself, of the tolerance with which nerves submit to forcible stretching, so far as the after performance of their functions is concerned. In view of the unsatisfactory results of the treatment of traumatic tetanus as at present conducted, there is full justification for the performance of the operation as, at least, a last resource, although I should myself advocate its trial, as in the case under the care of M. Verneuil, as soon as the signs of the disease are distinctly recognized.

The Lancet

*St. Bartholomew's Hospital Reports, vol. xi., 1875, p. 287.

† THE LANCET, June 26th, 1875; Clin. Soc. Trans., vol. vii., 1874 p. 100.

CANADA

Medical and Surgical Journal.

MONTREAL, JUNE, 1876.

COLLEGE OF PHYSICIANS & SURGEONS, L. C.

The semi-annual meeting of the Board of Governors of the College of Physicians and Surgeons of Lower Canada, was held in this city on Wednesday the 10th May ultimo, when some very important business was transacted.

In our last we published a series of amendments which it is proposed to make to our present act of incorporation. These were fully discussed at the meeting, and their general tenor accepted. A committee was named for the purpose of drafting a bill of amendments to the present act, which will be again brought up for discussion before the College at its next meeting in September; after which it will be submitted to the Quebec Legislature, and we should suppose, that coming as it will, from a recognized body, who hold status as the representatives of the Profession in this Province it will become law. It is greatly to be desired that the profession more generally should assist in building up an institution which has, during the past few years been allowed to languish, we might almost say die of inanition. We have heard some strictures concerning the usefulness of the College and the desirableness of prolonging its existence. We are inclined to the belief that it would be far better for the malcontents to comply with the regulations of the College and become members, in due course of time, take some interest in the proceedings of the College, and if the old fogies in whose hands the affairs of the College are at the present, time are too slow

for our young progressive fellow-countrymen, simply assist in putting in better men.

A very pertinent question is asked by the young gentleman who edits the "L'Union Médicale du Canada." He is desirous of knowing what good the Medical profession has derived from the establishment of the College of Physicians and Surgeons of Lower Canada. To this we can simply reply that no person can legally practice his profession in this Province without holding the license of the College. Before the establishment of the College, the Profession in Lower Canada was governed by an act or ordinance passed in the reign of King George the third. Similar acts existed in all the colonies under the British Crown—many are in force to this day. By the terms of that act the members of the Board were appointed by the Crown, under the present system the members of the Board are elected by the profession. This may not be considered by our contemporary a gain in the right direction. The article alluded to appears to us to be terribly revolutionary, with very little knowledge of facts appertaining to the question at issue. But again, the status of Medical education has been raised since the passing of the act of 1874, before the passing of that act, any person could demand an examination from the Board without any evidence of having attended a curriculum of study, under the act a curriculum is demanded, and before commencing to study medicine the candidate must pass an examination in the preliminary branches of general education. These are surely gains in the right direction.

We are not anxious to excite the terrible ire of our contemporary, as we fear he would slay us without mercy, but simply beg of him to become a member of that do nothing College, and if no better thing can come of it, he will, at least, have the satisfaction of sharing in the "Homeric supper" which he suggests, or of being able to write his own epitaph on the monument which will have to be raised to the memory of the late College of Physicians and Surgeons of Lower Canada, after its effulgence has been forever extinguished by "L'Union Médical du Canada."

THE CANADA MEDICAL AND SURGICAL JOURNAL

With this number we close the fourth volume of the new series of this periodical, and we desire to return thanks to our contributors who have aided the publication by preparing for its pages many important original papers. In commencing the new volume in July next, we have to announce to our subscribers that a new feature will be introduced which will greatly add to the interest and usefulness of our journal.

Our efforts have been seconded by a number of gentlemen who have assumed the task of giving us for publication translations from many foreign Journals, so that we will endeavour to keep before our readers a synopsis from foreign sources of all important articles. This will come under the heading of Translations. A reading club in connection with this work been established, and we have at command the following foreign Journals :

Archiv. für Path. Anatomie and für Klinische Medicin,
(Virchow).

Archiv für Klin. Chirurgie, (Langenbeck).

Archiv (Deutsches) für Klinische Medicin.

Archiv der Heilkunde.

Archiv für Gynæcologie.

Archiv für Kinderheilkunde.

Archiv für Ophthalmologie.

Archiv für Mikroskopische Anatomie.

Centralblatt für die medicinischen Wissenschaften

Wiener Medicinische Presse.

Berliner Klinische Wochenschrift.

Revue des Sciences Medicales.

Archiv. Generales de Medicin.

Bulletin General de Therapeutique.

Gazette Hebdomadaire.

Bordeaux Médical.

L'Année Médicale Journal de la Société de Médecine de
Caen et du Calvados.

Selections from these journals of scientific interest, and whatever is of practical value will be translated and given to us for publication. This will, we trust, increase the usefulness and give additional interest to our pages.

We have been requested by Dr. Pepper to give insertion to the following circular, and as it contains matter of general interest to our readers we cheerfully comply.

UNITED STATES CENTENNIAL COMMISSION.

INTERNATIONAL EXHIBITION, 1876,—PHILADELPHIA

BUREAU OF MEDICAL SERVICE.

Owing to the very large number of persons who contemplate a visit to Philadelphia during the coming summer, it seems important that the utmost publicity should be given to all facts bearing on the sanitary condition of the city.

The following statistics, which have been obtained from the most authentic sources accessible, represent the mortality in some of the chief cities of the world during the past four or five years:—

	Number of years.	Average population	Average total mortality	Average death rate per thousand.
VIENNA,	5	648,560	20,424	31.42
NEW YORK	5	994,458	29,601	29.93
BERLIN,	4	950,000	28,420	29.91
LONDON	5	3,284,488	76,741	23.33
PARIS	4	1,851,792	42,724	23.06
PHILADELPHIA	5	744,831	16,573	22.27

While thus showing an average rate of mortality more favorable than that found in any other city containing over 500,000 inhabitants, Philadelphia has recently (1874) attained a degree of healthfulness almost unparalleled viz: with a population at the time of 775,000, the number of deaths was but 14,966, giving a death rate of only 19.3 per thousand. These very favourable results are largely due to the abundant and cheap water-supply, and to the opportunities given, even to the poorest citizens, for the enjoyment of pure country air in the great Fairmount park, which contains 2991 acres. The extent to which this is valued by the citizens may be inferred from the fact that during the year 1875, the Park was visited by over eleven million persons.

The most powerful influence of all, however, is the absence of that overcrowding of the population, which is the most fruitful source of sickness and death in many quarters of nearly all other large cities. This will be more clearly comprehended when it is remembered that the 817,488 inhabitants of Philadelphia are spread over an area of 1298 square miles, which are traversed by more than one thousand miles of streets and roads; and that the city contains, in addition to other kinds of buildings, 143,000 dwelling-houses occupied by families,—a number exceeding by over 40,000 that of any other city in America.

The climate of Philadelphia is also, on the whole, a favorable one, although presenting many of the peculiarities common to inland localities. The mean annual temperature of the last ten years is 53.73° Fahrenheit; the average annual rain-fall is about forty-five inches.

The following table exhibits the mean temperature of each month for the last ten years, showing that the range is far less extreme than is found in many other less favorably situated localities. :—

MEAN TEMPERATURE (FAHRENHEIT) OF EACH MONTH
DURING THE PAST TEN YEARS:

January....32.72° F.	May.....63.24° F.	September..67.72° F.
February...33.12 "	June.....73.54 "	October....56.03 "
March.....39.16 "	July.....78.74 "	November..43.34 "
April.....53.36 "	August....75.92 "	December...33.92 "

It is thus seen that only during the months of June, July, and August does the mean temperature rise to a high point. During this period there are very rarely prevailing any epidemic diseases; and the chief mortality occurs among children, especially among the poorer classes.

The health of Philadelphia is at present unusually good. Timely efforts have been made to secure an abundant water-supply to meet the great increase in the demand which must be expected this summer, as compared with previous years. Constant watchfulness will be exercised by the authorities to maintain cleanliness, and to avoid or remove every possible cause of disease.

Within the Exhibition grounds a rigid sanitary inspection will be maintained, under the control of the Bureau of Medical Service; and thus a guarantee will be afforded that no cause of infection or disease will be allowed to occur through neglect of this important duty.

The object of this circular has been to call attention to the unusual sanitary advantages of Philadelphia, and to the preparations which have been made to ensure the highest possible degree of healthfulness during the approaching Exhibition season. It is proposed to issue at certain intervals other circulars, announcing in an official and accurate manner the sanitary condition of the city, so that entire security may be felt by all who desire to visit the Centennial International Exhibition.

WILLIAM PEPPER, M. D.,

15th April, 1876.

Medical Director.