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CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Case of Epithelioma of the Tongue. Complete extirpation of the Organ. Return of the disease. By GEO. E. FENWICK, M.D., Professor of Clinical Surgery, McGill University. Reported by GEO. ROSS, A.M., M.D., House Surgeon Montreal General Hospital.

Siméon Gauthier, aged 45, was admitted into the Montreal General Hospital on the 15th of February, 1869, suffering from epithelioma of the tongue. He is a man of good build, but sallow and unhealthy aspect: he has, however, always enjoyed fair average health. The ulcer occupies the left side of the tongue, about $1\frac{1}{2}$ inch from the tip, and is about as large as a quarter dollar—it has the characteristic hard, raised edges and a foul sloughy base. The floor of the mouth and under surface of the tongue are quite healthy in appearance. It has existed for only one month, and consequently its growth has been exceedingly rapid. It began as a very small ulcer which was irritable and troublesome, and latterly he has suffered from severe lancinating pains through the tongue and below the lower jaw. The teeth corresponding to the ulcer are smooth and even, and could not possibly have abraded the edge of the tongue. He has been a smoker for many years, always using a clay pipe, and sometimes was conscious of a slight scorched feeling of the tongue after smoking heavily. His family history gives no sign of cancerous taint: his father died at an advanced age, he thinks of some pulmonary complaint, and his mother is still living and well: he knows of no instance of cancer of any kind amongst his other relatives. The sublingual and submaxillary glands are quite unaffected.

On Tuesday the 16th February, Dr. Fenwick assisted by Dr. Geo. W. Campbell, Professor of Surgery, McGill University, proceeded to the operation of ablation of the entire organ in the following manner (which is more minutely described in another similar case reported at page 292 of vol.

5 Canada Medical Journal.) The tongue was first transfixed by a strong double hempen ligature and the ends taken charge of by the assistant. The incision was made in the mesian line below the jaw, the curved needle thrust into the mouth mid-way between the symphysis and hyoid bone, and the chain of the *écraseur* drawn through; this was then pressed well back by Dr. Campbell (the tongue being at the same time drawn forcibly forward.) The instrument was fixed, and tightening immediately begun. The time was taken by Dr. Howard, and 30 seconds allowed to elapse between each *click* of the handle. At the end of 20 minutes it was found that the division was complete and the tongue was gently drawn from the mouth by Dr. Campbell by means of the cord attached to it, and the operation was finished.

During the whole proceeding the patient was completely anæsthetized, the influence having been first established by chloroform and then continued by ether, the latter having been preferred on account of his age and rather debilitated condition.

The bleeding was exceedingly trifling, calling for no interference whatever.

He was put to bed, and ordered to have small pieces of ice in the mouth from time to time. At 9 p.m., his pulse was 87; no bleeding; no pain; could swallow a little milk and a few spoonfuls of beef tea.

17th February.—Slept several hours during the night; cheerful; pulse 85; swallows fluids with very little difficulty.

18th February.—Doing well; floor of mouth covered with a yellowish slough; ordered *Lotio Acidi Carbolic* (1 part to 30 parts of water) to be used frequently to rinse the mouth. Articulates even now some words without much apparent difficulty.

He recovered without a bad symptom, the wound granulated rapidly, and he was discharged well (to all appearances) on the 20th March, 1869.

No more was seen of the patient until he returned to the outroom of the Hospital complaining of a small lump in his neck; this was in the first week of July. The disease had returned in the glands of the neck, 4½ months after the operation. Since that time until closing this report, 21st August, 1869, the disease has progressed with its usual rapidity, and now the whole of the left side of the neck is involved in an enormous cancerous mass which will of course very shortly prove fatal as his general health has already suffered very considerably.

Remarks.—This is the second case of excision of the tongue which I have performed, and the operation in each case was a modification of that described by Mr. Nunceley of Leeds. In the first case, the disease returned in the glands of the right side of the neck, affecting the deep

seated as well as the superficial parts. This mass, when I last saw the patient, was about the size of two fists, extending from the ramus of the inferior maxilla to the clavicle. The patient died apparently from inanition and cancerous cachexia, on the 5th of April last, four and a half months after the operation. The stump of the tongue never gave him any trouble, but the diseased mass above mentioned, interfered with his swallowing solids, and the last few days of his life he could with difficulty swallow even fluids.

In the case above reported, a similar unfavorable result is apparently imminent, the mass of glands is nearly the size of a child's head, and the patient swallows with difficulty.

I would draw attention to the fact, that in both of these cases, the loss of blood was very trifling, although the whole organ was removed, or as much of it as it was possible to include in the chain of the *ecraseur* without injury to the epiglottis.

With regard to the advantages of the operation, I look upon it as not only justifiable but desirable as it removes from the sufferer a foul ulcerated sore, which is a source of great misery from its situation, and must, to a certain extent, act injuriously on the patient's general health, interfering greatly with his digestive organs, as no particle of food can be taken without some portion of the discharge from the sore passing with it into the stomach.

That removal of the diseased mass prolonged life in both cases reported, may be readily admitted, as in the first case operated on the patient had suffered from frequent losses of blood which had reduced his strength. In the case of Gauthier, the disease was rapid in its invasion, and I have little doubt, that the poor man would soon have succumbed, had the operation not been performed. I need only add, that I shall have no hesitation in repeating the operation of excision of the tongue in any suitable case which may present itself.

Aneurism of Arch of Aorta. Under care of J. M. DRAKE, M.D., Professor of Clinical Medicine, McGill University. Reported by T. G. RODDICK, M.D., Assist House Surgeon Montreal General Hospital.

Philip Evans, æt 32, formerly a soldier, of late years a lumberman, was admitted into the Montreal General Hospital under Dr. Drake on the 19th March, 1869.

On coming in he seemed to be suffering intense dyspnoea, with great lividity of face, restlessness, and laryngeal breathing well marked. He could not be persuaded to lie down for fear, he said, of suffocating, and

on examination of the chest nothing could be made out but bronchitic sounds and the transmitted laryngeal breathing. He was ordered hot stupes over the chest front and rear with 2 oz. brandy and the following:—

℞ Potass Bicarb ʒ ij. Ext Senegæ Fld ʒ i. Vin Ipecac ʒ iij. Aquæ ad ʒ vi.

Sig. A tablespoonful every three hours.

History. He declares he had never been ill until a short time before the past Christmas, when while engaged in some lumbering operation he had a fit in which he partially lost consciousness and on recovery found the right arm paralyzed. He was removed to a neighbouring shanty, and in a couple of days felt sufficiently recovered to undertake a journey home of some forty or fifty miles. Ever since then he has been very much troubled with a cough and continuous pain in the left back and shoulder. He has also lost strength and flesh rapidly and his voice has become altered and gradually hoarse. About three days before admission the laryngeal difficulty set in and has rapidly increased. His family are remarkably healthy and as far as he knows are all living. It may be noticed here that all the fingers present the clubbed appearance, but this he says has been constant since he remembers. He has been accustomed to do heavy liftings, but could always perform a man's work up to the date of the fit.

March 20th, noon.—Has slept none all night and can only rest with the body erect or leaning forward. Only one dose of the medicine ordered last evening has been taken owing to the great difficulty in swallowing and the tendency to spasm on the slightest movement of the muscles of deglutition and of the larynx. On examination the following were the physical signs in the chest:—respiratory sounds very weak on the left side, but exaggerated on right; vocal resonance and fremitus nil on the left side. On percussion a dull space two inches square, situated over the left sterno-clavicular articulation, was readily discovered. It extended for a distance of two inches along the clavicle, and about an inch and a-half down the chest. A very great impulse with well marked systolic bruit were also noticed over the same space, transmitted along the vessels of both sides, but soon becoming faint as you receded from the spot. The pupils were found of unequal size, the right being nearly twice the size of the left. The tendons of the sterno-mastoid muscle appeared unsymmetrical, the left being with some difficulty made out, and looking as though ruptured. The trachea was noticed to lean to the right of the median line as if pushed aside by some body at the root of the neck. With these data a diagnosis of aneurism of the arch was made in preference to cancer or tubercular consolidation of the left lung which were thought of.

Treatment.—Ordered to discontinue mixture and substitute the following:

℞ Potas Chlor ʒij. Potas Nit. ʒi. Syr. Scillæ ʒiv. Aquæ ad ʒvi.

Sig. A table spoonful every 3 hours.

Turpentine stupes over larynx, and frequent inhalations of steam. Whiskey substituted for brandy.

8 o'clock p. m.—Has just had a violent spasm after an inhalation in which he struggled violently to recover breath and is now bathed in a cold perspiration. The fit lasted about ten minutes.

9 o'clock p. m.—His right arm is found to be paralysed and no pulse at the wrist, or as high as can be felt in the subclavian—pulse in the other arm 128. Paralysed arm colder than the left; sensation somewhat impaired but motion annulled. After twenty minutes the pulse gradually returned and with it the paralysis disappeared. The pulse, however, did not become equal with the other for nearly an hour.

12 o'clock (midnight).—Feels much better, the pupils equal in size, pulses alike in number and volume—120 in the minute. Breathing improved and he has more strength to expectorate. No paroxysm since eight o'clock.

Sunday 21st.—Could get no sleep. Pulse equal at each wrist and 128; but weak. Left pupil has again returned to its former minimum size. Suffered intense dyspnoea from midnight to five o'clock; pulse stronger in post tibial than at the wrist; physical signs not altered. The pulsation in the right subclavian cannot yet be satisfactorily made out but is very apparent in the brachial and lower axillary. It has been suggested that collateral circulation has been set up in the right arm to cause return of pulsation, or the clot may have been soft or irregular in shape. The lungs are in about the same condition as on admission, excepting a few moist sounds indistinctly heard at the inferior angle of the scapula on the right side. The dull space at the left border of the sternum is unchanged.

9 o'clock p. m. (21st.)—Right pulse, if anything, stronger than left but both exceedingly weak and compressible. The posterior tibials are still much stronger than the radials. He is bathed in a cold perspiration, and has taken no nourishment all day. Blowing breathing on the left side behind with pain on the same side about the middle of the chest in front. Pupils again nearly alike.

March 22nd.—Has slept well during the night. He had five injections containing in all twelve ounces of beef tea and this morning drank a ½ pint of the same with very little difficulty; right pulse stronger and right arm warmer than the other; pupils again of unequal size—pulse 120

physical signs unaltered, but breathing less laryngeal and thought to be dullness on both sides behind and at the bases of the lung.

March 23rd.—Died at midnight apparently of asthenia. The breathing for some hours before was remarkably clear and he took a good deal of nourishment during the day.

Autopsy.—15 hours after death—Aneurism. Opening the thorax, the first object visible was a large tumour situated at the root of the neck, and for the most part on the left side of the sternum. This was found, on close examination, to be an aneurismal sac developed from the upper part and centre of the arch of the aorta. Strong attachments had taken place between it and the surrounding parts. The trachea, œsophagus, thoracic duct, left pneumogastric nerve and left recurrent laryngeal nerve were so involved as to need most careful dissection for their separation. The tumour was about the size of the adult heart, weighed six and a half ounces, and measured transversely twelve inches, and longitudinally fourteen inches in circumference. It was filled with strong, beautifully lamellated fibrine, which was with great difficulty removed; and indeed, in places, it required the most careful handling to prevent the coats of the sac from being torn away along with the firmly adherent fibrine.

The calibre of the trachea and left bronchus was found to be considerably encroached upon by the pressure of the sac. The arteria innominata appeared to arise from the middle of the right side, and the left carotid and subclavian from almost the summit of the aneurism.

Heart.—Slight hypertrophy, but valves sound. Right ventricle filled with a large clot.

Lungs.—Consolidation of both lower lobes, but no collapse; other internal organs congested.

Abscess of the Cerebellum, following Otitis produced by injury to the head. Under care of J. M. DRAKE, M.D., Professor of Clinical Medicine, McGill University. Reported by T. G. Roddick, M.D., Assistant House Surgeon Montreal General Hospital.

William Williamson, æt 23, a native of England, was admitted into the Montreal General Hospital, under Dr. Drake, on the 2nd of April, 1869, suffering from most excruciating earache with an abscess over the left mastoid bone.

History.—He had been a sailor up to two years ago, about which time while at sea, he quarrelled with his captain, and was struck by him with the sharp end of a marline spike just above and a little behind the left

ear. This produced an external wound, and in a few hours intense pain in the ear ensued, which lasted for some weeks. While the pain continued there was a very copious discharge of pus from the ear, which, however, almost entirely ceased in about two months. The wound did not close for three months, and then he thought he was perfectly well. In three or four weeks, however, an abscess formed in the situation of the wound, and while it was maturing the ear commenced to discharge again. Now also he was troubled with occasional fits of earache. The abscess was allowed to open by itself and then he obtained relief. More or less discharge from both ear and abscess continued but without much apparent inconvenience to him up to the past Christmas, when the earache which alone had troubled him before, became reinforced with very severe neuralgic pains over the side of the head and face. At this time he placed himself under care of Dr. Wagner of Dickenson's Landing who relieved his sufferings from time to time with opiates and soothing applications, and about the first of April sent him to Montreal to obtain if possible further advice.

His health had been failing for some months before admission, and a marked symptom in his case was obstinate constipation. In fact he rarely had a motion without an aperient.

On admission Dr. Drake examined him carefully and very soon discovered a small portion of denuded bone by passing his probe downwards and forwards in the direction of the external meatus. The patient was put under chloroform and a free incision made through the original wound and down to the bone. Warm poultices were ordered to the part with Pulv. Doveri gr. x. at bedtime.

April 5th.—The wound looks very much more healthy than before the operation and he suffers comparatively little pain. The poultices have been continued without intermission, and the opiate is still to be given each night. He is also ordered Pil Coloc et Hyosey. no. iij for his bowels.

April 6th.—Condition unaltered; bowels opened only once; is ordered: R̄ Ammon Mur. Potas Iodid aa ʒ ij. Infus Cinchon ʒ xij.
Sig. 2 tablespoonfuls three times a day.

April 11th.—Was given a seidlitz last night which however did not affect his bowels so he is ordered two drops of Ol. Tiglii. The incision looks well. Very little pain in the ear but a considerable discharge. The opiate to be continued at bed-time as before.

April 14th.—Is not so well to-day. Complains of pain in the side and back of the head. When crossing the ward this morning he staggered and fell as though in a faint. Has been frequently seen by the

other patients to stagger, and he generally requests to be supported when leaving his bed.

April 17th.—Has been noticed to sleep a good deal within the past two days. At times he cries out with the pain of his head, which seems to occur more in paroxysms now than formerly. As the discharge is somewhat fetid, injections of carbolic acid lotion are ordered as also a few drops of pure acid to be added to each poultice.

April 20th.—The patient had an enema of castor-oil and turpentine last night, which effectually cleared out his bowels. The pain seems to be getting worse. He is slightly feverish to-day; pulse, 110; tongue, coated; skin, hot; and tendency to vomit. The wound looks inflamed, and the discharge from the ear is more profuse than ever. He is continually crying with pain. Found necessary to give him a grain of morphia.

April 23rd.—Can get no rest from the pain. Pupils very much dilated; pulse, 115; tongue, furred; vomits frequently. Is so weak that he requires assistance even to be raised in bed. The discharge is profuse and very fetid. Ordered *Ol Tiglii gtt. ij.*

April 26th.—Evident symptoms of meningitis; pulse frequent, soft and irregular; vomiting; deafness; dry tongue; abdomen retracted; incontinence of urine; the least motion of the head produces a general convulsive twitching of the limbs—pupils insensible to light. Ordered the following:

\mathcal{R} Sodæ Bicarb, 3 ij. Acid Hydrocyan min, xx. Tinct Belladonnæ, 3 i. Aquæ Ad, $\frac{3}{4}$ vi.

Sig. A tablespoonful every four hours.

Also cold to the head, warm water to the feet, and a blister to the back of the neck—beef juice and stimulants.

April 27th.—Had several epileptiform convulsions during the day and died at 6 p. m.

This case is exceedingly interesting in a physiological point of view, from the want of co-ordination noticeable on several occasions, and also from the total absence of paralysis during the whole course of the disease. Abscess of the brain had been diagnosed some days before he died, and the symptoms of meningitis, which subsequently supervened, tended to confirm such a diagnosis.

Autopsy—18 hours after death.

Brain.—The calvarium being carefully removed, the dura mater at the base of the brain and near the site of disease was found smeared over with pus. The dura appeared pale in colour;—arachnoid cavity for some distance round, and all the superior petrosal sinus were loaded with pus—

membrane formerly adherent to petrous portion of temporal bone, and at some places perforations existed through which pus from the interior of petrous bone found its way into the arachoid cavity. The whole of the temporal bone was removed for examination. At the upper and anterior border of the mastoid portion was a deep excavation behind the meatus auditorius externus which would freely admit the point of the little finger. Both the anterior and posterior surfaces of the petrous bone within the skull were found to be honey-combed in all directions, but especially in the neighbourhood of the depression for the Casserian Ganglion. A sequestrum was observed on the external surface between the meatus and mastoid cells.

The brain being removed, the substance of the cerebrum appeared firm throughout—puncta vasculosa rather more numerous and larger than usual. On incising the cerebellum an abscess was found on the left side, near the upper and anterior margin, about the size of a walnut, containing thick, yellowish green pus, and lined throughout by a thick firm membrane. There were no other abscesses in any other part of the encephalon nor in any other viscera.

Trichiniasis being an abstract of an essay submitted to the Medical Faculty McGill University for the degree of M.D. C.M. By THOMAS D'ARCY LUCUS.

(Continued.)

June 4th.—Wife very anxious concerning her husband. The Dr. expressed his conviction that it was the pork disease, and that he could be certain by the removal of a small portion of flesh. They appeared to understand something concerning the nature of the disease, the wife stating that "Simon never would allow the meat, intended for him to eat, to be cooked, but that she never ate any uncooked." The patient readily consented to the removal of a piece of tissue, the Dr. accordingly excised a small portion of the muscular tissue of the Deltoid, from near its insertion into the humerus. By microscopical examination it was found to contain *Trichinæ* moving about in the field of the microscope. For the purpose of studying its effects, we decided to feed this to an inferior animal; a guinea pig was accordingly selected, and the removed muscular tissue weighing gr. xix was administered.

June 5th.—Palpebral œdema diminishing, that of the limbs increasing, other symptoms similar to those of yesterday; beer directed to be used ad libitum, anodynes continued.

June 5th to 9th—Palpebral œdema disappeared, in other respects no marked changes.

June 10th.—No urine passed for fifteen hours, bladder emptied by means of the catheter; eight or ten small vesicles containing a serous fluid have appeared on the anterior and inferior portion of the abdomen; patient sinking, pulse 132 and feeble; no motion could be endured.

June 12th.—Patient is quite hoarse, the oedema has become general, vesicles increasing in numbers and extent; urine removed by means of the catheter.

June 12th to 15th.—No important changes.

June 16th.—Loss of voice and delirium.

June 16th to 18th.—Sores on lips, respiration, 45 per minute, pulse very feeble and cannot be counted: feces passed involuntarily.

June 19th.—Patient died; a post-mortem examination refused, it was only after much persuasion that we obtained permission to remove two portions of the tissue of the biceps and gastrocnemius, the total weight of the removed portions amounted to one ounce.

With the view of satisfying ourselves as to the accuracy of experimenters and observers with reference to:—

1st. The period of time necessarily required for the parent *Trichinæ* to bring forth their young.

2nd. Whether the young *Trichinæ* reach their ultimate destination through the medium of the circulation, or by the process of vermiculation, or by both.

3rd. The period of time required for the ultimate process of encapsulation to take place. We fed a guinea pig, two rabbits and a cat, on the ounce of trichinous meat removed from the dead subject, giving to the guinea pig, which it will be convenient to designate, guinea pig No. 2 (in contradistinction to guinea pig No. 1. which was fed the grs six of muscular tissue taken from the living subject) 3j. to each rabbit 3ij and the cat received 3iij.

Killed guinea pig No. 2, forty hours after the administration of 3j. of infested meat. *Trichinæ* were found in the mucus of the lining membrane of the duodenum and jejunum, they had become freed from their cysts and increased much in size. The different parts of the small intestine were cautiously examined, but no young *Trichinæ* were present nor could any be distinguished in an intra-uterine stage of development. Killed rabbit No 1, nine days after feeding it 3ij. of the poisoned meat, with the following results. No *Trichinæ* were found in the stomach, colon or lower part of the illium, none could be found in peritoneal cavity, or adjacent muscles, or in the blood. An examination of the heart yielded negative results. Parent *Trichinæ* were found in the upper three-fourths of the small intestine; one of these, a female, was

most carefully examined, it was sufficiently large to be seen by the unaided eye, the receiving portion of its generative apparatus was stuffed full with young *Trichinæ* no young ones could be found in the intestinal mucus.

Killed the cat fourteen days after it had been fed the 3 iij. of *Trichinous* meat.

Numerous female (parent) *Trichinæ* were found in the small intestine; rarely was a male met with. Minute larval *Trichinæ* were found in great numbers in the intestinal mucus and peritoneal cavity; they were quite abundant in the muscular diaphragm; none in the blood, heart, urine or pleural cavity, all of those found were very small.

Rabbit No. 2, died twenty-three days after 3 ij of the meat had been administered. Immense numbers of female *Trichinæ* were found in the small intestine, many of them containing the young worms; none could be seen in the stomach, duodenum or colon; Larval *Trichinæ* in all stages of pre-encapsulation were found in very great numbers in the diaphragm and other abdominal muscles. The muscles of the thorax, head and legs were also examined and found to contain the worms; they were about twice as numerous in the diaphragm as in those of the trunk and nearly three could be counted in the diaphragm to one in the muscles of the legs. Only a very few of the worms had become encysted. The urine, liver, pancreas, kidneys, lungs, spleen, blood and heart were also examined but with negative results. The muscles of the eye were not examined. Killed guinea pig No. 1, which had been fed thirty days, previously, grs xix. of *Trichinised* meat, taken from the living subject; muscular tissues from various parts of the body were examined, and *Trichinæ* found in every instance except in the specimens obtained from the heart. The intestines and blood were not examined. The average dimensions of these muscular *Trichinæ*, although they differed much in size, might be stated to be about one-third the size of the parent *Trichinæ* found in the intestines of guinea pig No. 2. A great many of them had become encysted; some of these cysts showed quite plainly the distinction between the outer and inner portions, a small pyramidal mass of adipose tissue could be seen at the ends of the cysts in a few examples.

In order to study carefully the relations of the cysts to the capillaries, the vessels of the right hind leg were injected with a solution of Prussian Blue, when it was placed aside for examination, the following day. The muscles of the leg were found to be the seat of the worms in an encysted condition, as the other parts of the body before examined, and the cysts in every specimen could be seen lying perfectly independent of the capil-

lary vessels, which passed over and around the cysts performing their inosculations.

Fredrich states that the parent *Trichinæ* bring forth their brood on the third day after being taken into the stomach. Fiedler and Lenckart were of the opinion that the young *Trichinæ* are born on the fourth day, but in the examples under consideration, we find evidence against these views.

In the case of guinea pig No. 2, killed forty hours after feeding it with the meat, no positive evidence is rendered relative to the subject under consideration except that the period which must necessarily elapse in order to complete the changes required for extra-uterine existence is greater than forty hours. In the case of rabbit No. 1, killed nine days after feeding it with the meat, young *Trichinæ* were seen in an intrauterine stage of development, but none were found external to that organ. In the case of the cat, killed fourteen days after the administration of the *Trichinized* meat, Larval *Trichinæ* were found in the muscular tissue, intestinal mucus and in different stages of intra-uterine development. In the case of rabbit No. 2, which died twenty-three days after feeding the meat, many of the parent intestinal *Trichinæ* contained young ones. Prof. Lenker of Dresden, published a case almost replete with information on this subject, a maid-servant (aged 24) ate of *Trichinous* meat on the 21st December, 1849: symptoms of the disease manifested themselves four days subsequently, and death took place on the 27th of January following: 37 days after eating of the *Trichinized* meat. By post-mortem examination it was ascertained that parent *Trichinæ* were still to be seen, which were only then ready to bring forth their brood.

The preceding remarks lead us to believe that some of the parent *Trichinæ* begin to bring forth their young as early as the third or fourth day after being introduced into the stomach of an animal; that different broods are brought forth by different parents and that other parent (female) *Trichinæ* may bring forth their young as late as the 37th day or even later.

Herbst, advanced the theory that the blood is the medium, by which the young *Trichinæ* reach the various portions of body,—a theory still defended by a number of able pathologists and physiologists in Germany, France, England and America. It is true enough that the young *Trichinæ* are sufficiently small to enter the minute blood vessels, to be carried along by the returning blood to the right chambers of the heart, through the pulmonary current into the left auricle and ventricle, from thence they would be disseminated by the force and current of the circulation to every part of the body. But Lenckart, Virchow and Lenker,

hold that the circulation has nothing to do with the dissemination of the worms and maintain that they reach their ultimate destination by the process of vermiculation. From the preceding observations and experiments we consider that the following arguments may be advanced in favor of the latter theory.

1. The weight of authority favors this view.

2. The form, outline and structure of worm are such as to specially adapt it to the fulfilment of such a process.

3. If the blood were the medium it is illogical to conclude that examinations in cases of experiments, should fail to find them in that fluid, when they can be seen in a pre-encysted condition in the muscular tissues. In the cases of the cat, rabbit No. 2, and guinea pig No. 1, the worms were found in the muscles while the most diligent search in the blood yielded only negative results.

4. The specimens taken from the hearts of rabbits No. 1 and 2, the cat, and guinea pig No. 1, were specially examined and no *Trichinæ* could be found. If the circulation were the means of dissemination of the worms, an examination of specimens from that organ should furnish positive evidence of the presence of *Trichinæ* as frequently as specimens taken from any other part of the muscular system. As the heart first supplies itself with blood by means of the coronary arteries there is nothing unphilosophical in concluding that this organ should of necessity contain the worms. But it may be asked how is the absence of *Trichinæ* from the heart explained if the boring theory be adopted. Lenckart's explanation is satisfactory on this point. He observes that "the worms having perforated the pericardium come in contact with an organ in constant motion, all attempts to remain on its surface must prove futile."

5. In the case of rabbit No. 2, which died, twenty-three days after being fed the *Trichinous* meat, the Larval *Trichinæ* in the muscular diaphragm were three times more numerous than in the muscles of the legs, and twice as abundant as in the muscles of the thorax, no such difference can be explained if the circulatory theory be adopted.

6. It is conceded that the striated muscular tissue is the favourite habitat of the *Trichinæ*, that of the various parts of this tissue they are found most numerous near the termination of the muscle into tendon or insertion into bone, and that certain tissues, viz. sclerous, cellular, etc., are exempt from *Trichinization*. These facts can be explained by none other than the boring theory.

7. In the case of guinea pig No 1, the capillaries could be seen passing over the cysts without having any connection with them showing that

the walls of the capillary do not form the cyst. But here it may be asked if the cysts are not thus formed of what are they composed? Virchow maintains that the Trichinæ lie within the muscular fibres (not between adjacent ones) and that the cyst is formed by thickened sarcolemma; but it may be remarked that this theory is not generally accepted; a more popular one being the following. The worms, lying between the adjacent muscular fibres, the cysts are formed by hypertrophy of connective tissue.

In the case of rabbit No. 2, which died twenty-three days after the administration of the Trichinous meat a few of the worms were encysted; this corresponds to the length of time usually assigned for this process to take place. The period required for all the Trichinæ to become encapsulated, when all dangers to the life of the bearer cease, must evidently be as variable as the duration of time required for the parent Trichinæ to bring forth their broods.

By way of résumé the following may be stated to be the course pursued by this wonderful worm. Introduced into the stomach in a semi-developed condition it passes at once into the small intestine where it becomes freed from its cyst, and increases rapidly in size; here the generative apparatus becomes apparent, and in from three to thirty-seven days it brings forth its brood, having accomplished this function its fell effects cease, it then perishes and passes off with the feces.

The young Trichinæ, liberated within the small intestine, immediately pierce its walls and pass to the striated muscular tissue throughout the body, the heart excepted, by the process of vermiculation, unaided by the current of the circulation, here they increase greatly in size and their intestinal canal becomes recognizable. In the course of twenty to twenty five days from the period of birth of the young Trichinæ, by an unknown process—perhaps as the caterpillar forms its cocoon as suggested by Langenbeck, they encyst themselves retaining the power of perpetuating their dangerous progeny for a great many years.

Case of Poisoning by Opium, successfully treated by the Hypodermic Injection of Atropia. Under the care of FRANCIS W. CAMPBELL, M.D., L.R.C.P., Lond.; Reported by GEORGE ROSS, M.D., House Surgeon, Montreal General Hospital.

At 3 o'clock on the morning of the 19th of May, I was called to attend upon a gentleman who had been accidentally discovered in his office, in a profoundly insensible condition. I found the pupils contracted to a pin's point, and an examination of his pocket, revealed a glass smelling strongly of Ladanum. While a carriage was being obtained to remove him to the Hospital, I noted the following condition: face was pale an

ghastly; eyelids closed; ears and back of neck of a livid color; pupils strongly contracted; and conjunctivæ considerably injected; teeth clenched; considerable rigidity of the muscles of the arms and legs; fingers and nails congested, and the thumbs of both hands rigidly extended at right angles; body warm; slight perspiration on forehead, of a cold, clammy character; breathing was loudly stertorous; respirations only 3 per minute; pulse 146, irregular in volume and rythm. The patient was removed to the Hospital, and for the subsequent report of the case, I am indebted to Dr. Ross, the House Surgeon.

A. B. aged 32, was admitted into the Montreal General Hospital, at 3.45 a.m., on the 19th May, 1869, suffering from the effects of an overdose of Opium. Upon admission his condition was as follows: the face was pallid; the lips and tips of the ears livid; skin dry; extremities warm; pulse 140, very feeble, compressible and irregular; heart's sounds very weak; respirations $5\frac{1}{2}$ per minute, jerking and stertorous. There was perfect insensibility; he could not be roused in the slightest degree by rough handling or loudly shouting; no reflex action was excited by touching the eye itself; the pupils were very strongly contracted and perfectly insensible to light; the conjunctivæ somewhat injected.

A 2 oz. vial, marked *Laudanum*, and containing about half a drachm of the same was discovered in his coat pocket, also a wineglass which exhaled a distinct odor of Opium.

The following particulars were gathered from him after his return to consciousness. He had been at his ordinary work the day previous, until 5.30 p.m. was drinking pretty freely during the evening; purchased at a druggists, 2 oz. of Laudanum, being able to obtain it as he had been in the habit of occasionally procuring it for previous attacks of neuralgia to which he was subject. Between 9 and 10 o'clock he partook of a light supper and between 12 and 1 o'clock in his own apartments he poured nearly the whole of the contents of the vial into the wineglass and swallowed it. It was not until a few minutes before three o'clock, that he was discovered by a friend, who was directed to him by hearing the deep noisy breathing. Dr. F. W. Campbell was immediately sent for and had him removed to the Hospital.

The first thing done was at once to empty the stomach by the use of the stomach-pump; a considerable quantity of fluid and half digested food was thus removed, the whole of these matters smelling distinctly of the poison. Sinapisms were applied to the calves of the legs and brandy and water and strong coffee were injected alternately in small quantities and at short intervals into the stomach.

His appearance now was unpromising in the extreme; the pallor and ghastly lividity of the face had markedly increased, the respirations continued as low as before and the pulse became even more irregular and somewhat intermittent.

It was now (4.30 a.m.,) determined to try the effect of the administration of Belladonna as an antidote. I accordingly injected hypodermically in the arm the one thirtieth of a grain of Sulphate of Atropia; within one hour the pulse had become steadier and the respirations were 12. Thus encouraged I repeated the same administration at 5.30; by 6 o'clock, the pupils were dilated to double their previous size; the respirations 15 and pulse 130; at 7.30 he got the third dose of the same amount; shortly after this the breathing became 8 per minute, deeply stertorous and noisy and the pulse rose to 145, again, however, to fall to 130 when the respirations returned to 15. The brandy and strong coffee, were meanwhile diligently injected into the stomach every half hour. At 10.45 a.m. being much in the same condition the fourth dose of one thirtieth of a grain of Atropia was injected; within half an hour, the pulse improved in force and volume and the color of the extremities altered decidedly for the better: at 11.40 he showed the *first signs* of returning consciousness viz: of his own accord opening his eyes and drawing up one leg and then the other.

It was now suggested to try the effect of *electricity*; accordingly one needle was fastened into the skin over the sterno-mastoid muscle, and another inserted over the diaphragm and a strong galvanic current made to pass between the two; this produced violent action of all the muscles of the chest and neck and seemed to rouse him thoroughly, for he moved about on the bed and made endeavours to speak. The cold douche was also brought into play, the water being dashed violently over his head and shoulders and the two methods together soon produced a marked effect, for he moved himself freely in attempting to resist the douche and made endeavours to speak. We had got him out of bed and supporting him between two others kept him walking constantly up and down the room. This exercise accompanied by unsparing and constant flagellation was persevered in for some hours. At ten o'clock he vomited freely and again several times during the afternoon. By four o'clock in the afternoon he was quite rational and intelligent. The convalescence was very tedious, extending over several weeks and characterised by great disorder of the alimentary canal; the prevailing condition being one of irritability of the stomach accompanied by diarrhoea. There was also considerable cellulitis of the lower extremities, especially of the left leg.

Remarks.—This case was certainly a most unpromising one; when

discovered he had swallowed the Laudanum, more than two hours, and when the stomach pump was had recourse to, more than three hours had elapsed: The symptoms certainly pointed to a rapidly fatal issue, and it was with but small hope of success that measures were taken to counteract the poison. The injection hypodermically of Atropia was had recourse to, in consequence of an article which appeared in the April number of the Canada Medical Journal, from the pen of Dr. M. S. Butler (Medical Record), who, in a most apparently hopeless case of poisoning from the injection of half a grain of Morphia, had recourse to the Atropia with success. Its effects in my case were most marked; within an hour the pulse had become steadier and the respirations had risen several per minute, and considerably of the steter disappeared. Scarcely any perceptible effect was produced upon the pupil by the first dose, but a second injection, an hour from the first, dilated them to twice their previous size, and brought the respirations up to 15 per minute. Thus encouraged, two hours after, a third dose was administered but this time the effect was not favorable, many of the worst symptoms returning. At 10.30 (two hours from third dose) as a *dernier resort*, we determined to try a fourth dose of the Atropia, which in less than half an hour was followed by favorable indications. In rather more than an hour from its administration, he moved one of his eyelids, soon after slowly opened it, and then moved both his legs slightly. In six hours therefore we gave him more than an eighth of a grain of Atropia.

REVIEWS AND NOTICES OF BOOKS.

Chloroform, and a new method of administering it.—By A. M. ROSEBRUGH, M. D., Surgeon to the Toronto Eye Dispensary. Read before the Canadian Institute, Toronto.

This is a neatly bound tract of some thirty pages, in which is discussed the subject of chloroform, in a clear, comprehensive, though brief manner, under the following headings, "Impurities of Chloroform," "Action of Chloroform," "Statistics," "Signs of Danger," "Modes of Death," "Resuscitation," "Administration," &c.

In these pages we have collected most that is at present known, relative to the use of Chloroform, as an anæsthetic agent. Dr. Rosebrugh, gives the best authorities upon the subject, and offers valuable suggestions. With reference to the administration of chloroform, the author remarks, "my method of administering is as follows:—The patient is placed on his back, either on a couch or table; and a linen napkin is placed over

the face, so that one thickness only covers it. A two drachm phial is filled with chloroform, an assistant observes the pulse, and holds the watch in such a position that the administrator may see the second hand. With the left he raises the napkin so that it does not touch the nose, about one-and-a-half inches from the mouth. The chloroform is now carefully dropped upon the napkin, over the mouth, a definite number of drops being allowed to fall per minute, commencing with a minimum quantity and gradually increasing until, in the third minute, the maximum quantity is reached. One third the maximum dose is given during the first minute, and two-thirds during the second. The maximum dose should be continued from two to six minutes, according to the effect of the anæsthetic upon the patient, and the degree of narcotism desired." In this method Dr. R., employs Prof. Simpson's *gillotine* plan, but claims to have originated a *system* not attained by the Professor. We have witnessed the exhibition of chloroform by this method, and unhesitatingly endorse the statement made by the author, that it possesses many advantages. We would recommend every practitioner to possess this work, as most convenient for reference, and to the young practitioner, it will be found a safe and valuable guide. C.

PERISCOPIIC DEPARTMENT.

Surgery.

ON THE INTERNAL USE OF LIME IN CANCEROUS AND OTHER TUMORS.

By Peter Hood, M. D.

We have heard a great deal lately about injecting cancers with acetic acid, bromine, etc.; freezing them; burning them; softening them with alkaline, or hardening them by acid caustics; deodorizing them; galvanizing them. In fact, numerous methods of *local* treatment are being discussed, while *constitutional* treatment is almost abandoned. It may not be ill-timed, therefore, for me to ask attention to the following statements.

Some years ago I was sent for to the borders of Hertfordshire to see a lady who was upwards of 80 years of age. I found her apparently a hale, hearty woman, and at first was at a loss to discover why I had been sent for as she was up and dressed, and appeared as if nothing ailed her. She was naturally of reserved character, and was a woman possessed of a "strong will." Some little time elapsed without her making any refer-

ence to the cause of my summons to her. When I asked her why she had sent for me, she replied to my question by asking me whether I believed that the inner powder of oyster-shells would cure cancer. I was somewhat surprised at the nature of the inquiry, and answered that I had never heard of such a remedy for the disease. She then literally unbosomed herself to me, and explained why she had sent for me. She undid her dress, and exposed the left side of her chest, which was perfectly flat, and covered simply by a piece of linen. This she removed, and exposed to view an enormous raw surface, which resembled the body of a sheep after the shoulder had been cut from it. The wound appeared comparatively dry, as I observed nothing indicative of any discharge from it excepting slight sanious discoloration on the linen that had covered it. She told me that she had had a cancer of the breast for some years, and that by a steady perseverance in the use of "oyster-shell powder" it had entirely separated itself from her chest as I then saw it. And I could not but remark that no surgical skill could have done it more effectually. She told me that she had lived for some time chiefly on bread and milk, and seldom had eaten any meat. She had never communicated the fact of her having this disease, even to her sister—a lady who was older than herself—and her maid was the only person who knew of it. How her sister, who slept with her, could have remained ignorant that her bed-fellow was laboring under some horrible complaint appeared surprising; but, on inquiry, I learned that this old lady had lost the sense of smelling.

Although the diseased mass had separated itself from this lady's person, there still remained the peculiar odor common to external sloughing cancer. I inquired how it was that she had resorted to this remedy, and she gave me the following history almost *totidem verbis*:

"Some years ago a gentleman living near the town in which she resided had a tumor on his cheek as large as a small orange. It was about the time that the late Sir Astley Cooper gave up practice in London and came to reside at Hemel Hempstead. This gentleman thought he could not do better than to go and consult Sir Astley about this tumor. Sir Astley saw it and told him it was cancerous tumor; and strongly advised him to submit to its removal. This the gentleman objected to have done; when Sir Astley told him that unless he did he would not live beyond six months. On the following Tuesday, being market day, this gentleman was riding through the town, when an old woman accosted him by saying: 'I hope, sir, you will pardon me; but seeing your face tied up, may I ask what is the matter with you?' His reply was: 'My good woman, I have a cancer in my cheek; and Sir Astley Cooper says I shall not live six months.' She rejoined: 'If you will try an old woman's remedy, I

am sure it will cure it.' This the gentleman agreed to do; and in less than six months the tumor disappeared, and he got perfectly well."

This lady knew all the parties, and it was the success which attended the remedy in this gentleman's case which induced her to employ it in her own. The following is a verbatim copy she gave me of a the directions for using the oyster-shell powder :

"FOR A CANCER.—Bake a quantity, say half a peck, of oyster-shells for three nights in a slow oven. Then scrape out the *small white* part of the shell, powder finely, and take as much as will lie on a shilling once or twice a day in a little warm water or tea. If that affects the system too much leave off a day or two and commence again.

"Should an ointment be thought desirable, mix the powder in cream, lard or quite fresh butter without any salt in it, and apply it. This treatment generally requires perseverance for three or four months before its effects are seen. The shells to be used are those which are *concave*."

This lady lived for two years after my first visit to her, and ultimately died in an epileptic convulsion, when she was apparently in her usual health. The wound resulting from the separation of the cancerous breast never entirely healed, but she never complained of any discomfort from it.

I have been in possession of these facts for some years, but should not have made them public, owing to the difficulty I felt in explaining the *modus operandi* of the apparently simple remedy of powdered oyster-shell in so formidable a disease as a cancer—notwithstanding that I had seen in the case of the lady recorded so remarkable a result from the use of the remedy, and having every reason to believe, from her known truthfulness, the account she gave me of the gentleman who had experienced such decided benefit from it—had it not been for a conversation I had recently with Mr. Spencer Wells, to whom I related the substance of the foregoing statement. He informed me that he attributed the efficacy of the remedy entirely to the lime contained in the powder. He told me that since he had read Dr. McClintock's observations some years ago on the influence of the chloride of calcium in checking hemorrhage in patients who had tumors of the uterus, he had used lime largely in the treatment of these and other tumors; and he had become convinced that an atrophy and calcification of fibroid tumors, resembling the spontaneous change or degeneration not unfrequently observed in such tumors, was often produced or hastened by the use of lime. And he added that he had reason to believe that the change commenced in the coats of the arteries supplying tumors with blood; that these coats underwent first an atheromatous, afterward a calcareous degeneration—in either case with a diminution of the caliber of the vessel and a lessened supply of blood. If the lime were

too long continued, he believed that all the arteries in the body, not those in the tumor only, began to degenerate; the first evidence being the formation of an arcus senilis around the cornea.

This explanation appeared so philosophical, that I felt I ought no longer to observe silence on a subject of so much importance, but submit the knowledge of it to those whose opportunities of seeing diseases of a cancerous nature are greater than mine, and who might feel disposed to give the remedy a trial; as it is one that is not likely to do harm, and may in some instances do good.

If there be any force in the reasoning of Mr. Spencer Wells on the facts which he has observed, I cannot see why the nutrition of malignant tumors should not be as readily affected by inducing atheromatous or calcareous degeneration of the vessels which supply them with blood, as the nutrition of innocent tumors would appear to be.—*London Lancet.*

ABSCCESS OF LIVER TREATED BY PUNCTURE AND INJECTIONS OF IODINE.

In the *Recueil de Mémoires de Médecine et de Chirurgie*, No. 103, M. Sistach publishes an interesting case of abscess of liver treated by puncture and subsequent injection. After pointing out the difficulty of diagnosing abscess from hydatid tumour, he goes on to say that, on consulting recent authorities, he has been surprised to find that this mode of treatment has been recommended for special cases. After quoting the remarks of various foreign writers, he adds: "For ourselves, in spite of the silence of authorities on the point, we believe we are fully justified in laying down the following conclusion:—When the hepatic tumour is high and has a reddened cutaneous surface, with superficial fluctuation, so that we are led to suspect an adhesion to the abdominal walls, puncture with the hydrocele trochar, and subsequent injections of iodine, may be adopted with great advantage. We prefer," he says, "the trochar to the bistoury, because it enables pus to be drawn off more rapidly and safely, and also because it allows of the injections being carried into the depth of the pus-forming tissues which have been previously washed with warm water." The iodine, he thinks, stimulates the walls of the abscess, and prevents the formation of pus.

CARBOLIC ACID IN ACUTE SYNOVITIS.

Dr. Hamilton publishes a case of Acute synovitis in which, suppuration having taken place, he adopted the following measures:—Having previously dipped the knife in a strong solution of carbolic acid, he

evacuated between six and eight ounces of pus by incisions, about an inch and a half long, on each side of the joint. He allowed the matter to escape, under what Mr. Lister has termed the carbolic veil. A paste of carbolic acid and linseed oil (one in three) and whiting was applied to the wounds on lead-paper. Slight pressure was placed on the sac of the abscess by two pads of lint on each side of the joint, and a bandage. The application of the paste was continued for two or three days, and the result was perfectly satisfactory.—*Lancet*.

Medicine.

ON INHALATION IN DISEASES OF THE THROAT, PARTICULARLY IN CROUP.

By HERMANN BEIGEL, M.D., M.R.C.P., Physician to the Metropolitan Free Hospital.

I propose to make a few remarks on the local treatment of those diseases of the larynx in which certain inflammatory conditions form the most prominent characters, and which may be successfully treated by the topical application of certain remedies. These diseases have only been made the subjects of careful study since the introduction of the laryngoscope into medical practice, and hence it has become necessary that every practitioner who intends to treat these affections should make himself acquainted, in the first place with the methods of laryngoscopic investigation, and in the second place with the local application of medicaments.

By far the greatest number of throat diseases which commonly come under our notice are of an inflammatory character, and if such a disease be situated in the pharynx, including the uvula, tonsils, and soft palate, the diagnosis will be easily made by simple inspection; but if the lesion be limited to the epiglottis, the vocal chords, or the lining membrane of the larynx, or if perhaps all these parts together be simultaneously affected, the nature of the disease cannot be discovered without the aid of the laryngoscope.

It is not my intention, however, to dwell on the methods of application of this valuable instrument, and I merely refer the reader to the works of Johnson, Gibb, Mackenzie, Türk, Bruns, and others.

Croup is one of those inflammatory diseases in which, at an early period, we are enabled to do much good, and to save the patient's life, by the timely application of proper remedies; but in which a short delay

may very often prove fatal. At the same time it is a disease very liable to be mistaken for another not less fatal, viz. diphtheria.

Attempts have been made, especially by French authors, to prove that these two diseases are identical; but every observer who has had ample opportunity for the close observation of both affections, will be at a loss to understand how such an attempt could be justified. It is a well known fact that diphtheria generally commences in the tonsils, and extends thence into the larynx, forming a false membrane, which is so closely adherent and even interlaced with the normal tissues that an attempt to remove it brings away small shreds only, with adherent portions of the mucous membrane, thus leaving a rough, bleeding, and painful surface. In croup on the other hand, although a false membrane is likewise formed, it is not adherent to the subjacent surface, but merely lying upon it, so that it may not unfrequently be expelled by the effort of coughing, in the form of a mould of the parts on which it has been formed. It is well known that in this manner not only a complete cast of the larynx, but also of the ramifications of the trachea and its branches, may be ejected. Much importance was formerly attached to the sound attending these fits of coughing, which has been described as barking, crowing, &c.; but no great reliance can be placed upon these signs, since they may be produced in many affections of the larynx. The most important fact, however, which distinguishes these two diseases, is the general or constitutional character of diphtheria, and the purely local nature of croup. This point is well illustrated by what occurs in the treatment of these affections: suppose that in either of these cases tracheotomy has been performed, in diphtheria the progress of the disease is not only checked, but the wound inflicted often takes on the diphtheritic character, whilst in croup this complication has never been observed, and we may very often save the patient's life by performing this operation at an early period.

In determining the value of the treatment of diseases of the throat by means of inhalation, much will depend upon the proper selection of an apparatus adapted to the nature and situation of the affection, as I have endeavoured to show in my work on this subject.¹ Inhalation cannot be considered as constituting of itself a system of treatment, but merely as a means for the local application of certain remedies, which has proved successful wherever a fair trial has been accorded to it.

Even after the long-continued debates and experiments in the French

¹ On Inhalation as a means of Local Treatment of the Organs of Respiration by atomized Fluids and Gases. London: Robert Hardwicke. 1866.

Academy of Medicine had settled the question, whether or not atomized fluids penetrate into the larynx, trachea, and lungs, doubts were entertained on this subject by high authorities, both in this country and in Germany. I may mention the name of Virchow, who raised objections on the ground, that in people long employed in factories, and breathing air charged with fine dust of various kinds, no particles of this dust could be found in any of their air-passages on post-mortem examination. These doubts have, however, been recently removed by Professor Zenker of Erlangen, who has published a number of cases in which snuff and different coloured powders have been found in the lungs of workmen employed in workshops in which such particles have been mixed with air. Since this Virchow has acknowledged the correctness of this view and the error of his former opinion. I am induced to draw special attention to these facts, in consequence of patients of mine, who have received benefit from this treatment, having been subsequently told by eminent members of the profession, that it is impossible that any advantage can be derived from this method, as no atomized fluid can ever enter the larynx.

From the remarks I have just made it is evident that the use of inhalation does not exclude treatment by the internal administration of remedies, whenever it becomes necessary; but this does not belong to my present task. I shall therefore pass on, at once, to the description of requirements of an efficient inhalation apparatus.

The instruments in general use may be described under two heads, viz. those worked by steam, and those worked by compressed air. The first kind is most conveniently employed when the patient is feeble, and when the fluid is not required in too concentrated a form; but the inconvenience connected with the instrument consists in the admixture of steam with the fluid, so as to render it impossible to determine the exact dose administered. Whenever, therefore, the general health of the patient admits, or when the apparatus is to be worked by a second person, or when the remedy is to be applied to children, that variety will be found most useful which is worked by compressed air. The most simple form of such apparatus is that devised by Dr. Bergmann, and improved by Dr. Andrew Clarke, generally known as the hand-ball atomiser. This instrument, when supplied with a tube as suggested by Professor Winterich, deserves the preference over all the other forms. The addition of this long tube causes the spray to be generated at the back part of the patient's mouth, and thus enables it to be applied more locally than is otherwise possible. Messrs. Meyer and Metzler, of Great Portland Street, manufacture similar tubes of vulcanite, which are not

so liable to be broken as those of glass, and are equally unaffected by corrosive liquids. This is the instrument which I generally employ in cases of inflammatory affections of the throat and windpipe.

The substances employed in the treatment of inflammatory affections of the throat are astringents and caustics—viz., tannin (in solutions containing from 2 to 10 grs. to the fluid ounce), sulphate of zinc (of the same strength), perchloride of iron (5 to 15m to 1 fl. oz.) alum (1 to 5 grs. to fl. oz), and nitrate of silver ($\frac{1}{2}$ to 5 grs. to 1 fl. oz). In simple catarrhal diseases inhalations of turpentine, and more especially of the vapour of chloride of ammonium, are of great service. The latter mode of treatment has rendered me great service in those cases in which an inflammatory state of the vocal chords, or the mucous membrane lining the larynx, has caused partial or total loss of voice in such persons as are obliged to use their organs of voice and speech to an inordinate degree, as clergymen, singers, actors, &c. At the end of last year a clergyman was sent to me whose voice was not only hoarse, but became entirely inaudible at each attempt to raise it to a high pitch for any length of time; the laryngoscope examination showed nothing but an inflammatory state of the vocal chords and the lining membrane of the larynx; much mucus was secreted, and a constant tickling felt in the throat, which gave rise to an uninterrupted cough. After many remedies had been employed and the local application of astringent solutions had failed, I advised inhalation of the chloride of ammonium, which after four weeks restored the voice to its full strength and vigour, and enabled the patient to perform his duties, which he had been unable to do for many years.

With regard to the different application of caustics and astringents in these cases, the following general indications may prove useful. We very often meet with cases in which the amount of irritation does not seem to be in proportion to the intensity of the inflammation. This is particularly the case where the disease is of long standing, and when the inconvenience caused is rather distressing than painful: a small amount of mucus is secreted, which is of a viscid character, and can only be expectorated with difficulty, thus producing a constant cough, which is increased by every attempt to speak or sing. Such cases do not bear astringent applications, under the employment of which the symptoms generally increase. The reason of this is obvious: the mucous membrane being chronically inflamed, and its nerves in a state of constant irritation, a kind of irritability is established, which by the local application of a stimulant is merely increased, whilst a solution of caustic, by destroying this chronic irritability and altering the nature of the inflammation, gives as it were a new vitality to the relaxed organ.

The same may be said of the opposite state of acute inflammation of the pharynx and larynx: here the irritation exists in a very high degree, and, unless some strong caustic agent be applied, no improvement can be affected; astringents, as well as weak solutions of caustic, adding merely to the irritable state without being able to arrest its progress. This is simply the same principle upon which the abortive treatment of inflammations of other mucous membranes is practiced, as in conjunctivities or in the case of the urethra in gonorrhœa. I could refer to a large number of cases supporting this view, which in private practice as well as in the hospital, have come under my notice.

The so-called ulcerated throat is very often not so painful to the patient as it is disagreeable to his friends from the fœtid character of his breath; and it is generally this symptom for which in private practice, the practitioner is consulted by patients, who usually attribute the cause to the stomach or to the lungs. This error may, moreover, be easily committed by the medical adviser if the patient be not carefully submitted to thorough laryngoscopic examination. I have myself known a lady who had been treated for some considerable time for disease of the lung, the only symptom present being a very unpleasantly fœtid condition of the breath, together with a slight cough; her friends were naturally much alarmed, but on careful examination I could detect no sign of any disease of her respiratory organs. I found, however, that several ulcers had existed in the posterior wall of the pharynx, which secreted freely, and thus gave rise to the fœtor described. Repeated applications of a solution of chloride of lime in an atomised state produced a more healthy condition, and at the same time destroyed the smell; the ulcers healed rapidly. Such ulcers often cannot be so easily detected as in this case, either from their position, or from the smallness of their size. When on the upper surface of the soft palate or within the arches of the fauces, close inspection is necessary for their detection, and no application is so convenient as that of the medicated spray. Such cases of long-standing inflammation, accompanied by ulceration and the production of mucus, are particularly well suited for treatment by astringent solutions applied in this manner. Some cases of obstinate ulceration of the throat, accompanied by fœtor of the breath, which do not yield to other treatment, may prove manageable when treated with inhalations of carbolic acid. This remedy may either be employed as spray, fifteen minims of the concentrated acid being added to one ounce of water, or by inhalation, for which purpose the inhaler which I introduced for inhalations of oxygen, and which is sold by Robbins, of Oxford Street, is well adapted.

In croup I combine, wherever it is possible, as I do in other diseases

of the organs of respiration, internal treatment with inhalations, or apply them alternately as the case may be; but very soon the little patients are either unfit or unwilling to swallow, and sometimes persist in their refusal very obstinately: here atomised fluids and vapours therefore are of particular value for two reasons; firstly, because some children who refuse medicine, look at the atomiser as a kind of toy, and willingly submit to its action; secondly, because there is no difficulty, in case of need, in forcing a child to expose his pharynx and larynx to the action of the remedy as the very act of screaming is very favourable to the entrance of the spray into the air-passages. The remedies employed by different physicians are the following:—

1. Bromide of potassium was first used in the atomised state in this disease by Dr. Schmitzler. In one of his cases, a boy, three years of age, was severely attacked, and his breathing became difficult in the extreme; in order to gain at least some momentary relief, large doses of tartar emetic were given without producing vomiting, and inhalation was merely tried as a last resource; a solution of bromide of potassium, five grains to the ounce, was applied in the form of spray, and its use was followed almost immediately by the expulsion of shreds of false membrane. The breathing became easier, without stertor; the child felt relief for two hours, when it relapsed to its former condition. It was subsequently relieved five times under the same circumstances; and although the relief felt was considerable, the progress of the disease could not be arrested at this stage. In other instances the same drug (ten grains to the ounce) was employed with success. I have myself tried this remedy at an early stage of this disease, and found the symptoms arrested.

2. Tannin has been strongly recommended, both in croup and diphtheritis, by Barthez and Trousseau. The solution applied contained five per cent. of tannin; each inhalation lasting from fifteen to twenty minutes. After several repetitions of this, large pieces of false membrane were ejected, and the breathing relieved. In some of these cases the voice was very hoarse, nearly inaudible, but was restored in consequence of the application of the atomiser. These authors state particularly that no difficulty whatever was experienced in applying the spray.

3. Lime-water has been found useful by many authors, who attribute to the agent the power of dissolving the pseudo membranes, both of croup and diphtheria; in the latter disease it has found a strong advocate in Dr. Geiger of Philadelphia. In croup I myself have been enabled to try it in several cases, in one of which it relieved the child in the course of twelve hours after other inhalations had been employed without producing any marked improvement. Professor Biermer speaks likewise

strongly in favour of this remedy. It is used in the proportion of one part to thirty parts of water, each inhalation lasting about a quarter of an hour, and to be repeated every two hours as long as bad symptoms are present.

4. Watery vapour has been recommended by MacIntosh for croup as well as for bronchitis. The same has been used by Budd, who combined it with the administration of emetics.

5. Oxygen has been recommended by Mr. Miquel. His patient was a little boy, twenty-one months old, who was suffering from croup: respiration abrupt, stertorous, whistling and irregular, numbering forty times in the minute; pulse small, very frequent, so as not to be counted, face and lips livid; the child's expression anxious, the patient was so exhausted as scarcely to be able to cough, and when he did so it was with a low barking voice. A large number of remedies were employed without success, while the administration of oxygen restored the child to health.

On reviewing these different remedies, it may be remarked that whenever we are called upon to act in cases of croup, it would be advisable to apply, in the first instance, the medicated sprays, these being very easily obtained, and the apparatus being always in readiness. The drugs above-mentioned I would from my own experience arrange in the following order, in respect to their value; first, lime water; second, tannin; third, bromide of potassium.

I need not repeat that, with these, the administration of emetics or other remedies may and must be combined if considered necessary. The vapours and oxygen are not equally simple in their administration, and therefore can be applied only in those cases in which a suitable apparatus may be obtained. For the the production of Steam, an apparatus may readily be extemporized by holding a funnel over a vessel of boiling water, the patient inhaling through the tube of the funnel.—*London Practitioner.*

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

REMARKS ON THE NATURAL HISTORY OF RHEUMATIC FEVER.

Dr. Daldy wished to know what was meant by "rheumatism," and what by "rheumatic fever." He would like to abolish the word rheumatism altogether, including, as it did, several conditions, such as neuralgia with swelling of the joints. By rheumatic fever was generally understood the lithiasis, for which the elder Dr. Warren had said that six weeks was the treatment. The so-called sub-acute rheumatism was really a form of remittent fever *plus* rheumatism. Many of the cases

mentioned by Dr. Gull as cases of rheumatic fever were not examples of rheumatic fever at all, but of a remittent fever, with associated local conditions, and having a course of from fourteen to twenty-one days.

Dr. Handfield Jones said that there was importance in the remark that rheumatic fever was not an uniform condition. There were many other instances, such as epilepsy, neuralgia, etc., where the phenomena were liable to mislead; and the mere phenomenal study of disease was insufficient as a guide to treatment. The pathology of rheumatism was not known; and its treatment was altogether empirical. Some rheumatic fever patients excreted much acid and received relief and benefit from alkalis; while in other cases with articular manifestations there was an excess of alkali, and here large doses of quinine did good. Again, some cases (but not all) derived benefit from the application of blisters, though they were not cured thereby. It was necessary to exercise discretion in selecting the proper treatment for a case of rheumatic fever. There was only one definite fact: that the production of much acid is a definite indication for the use of alkalis. It ought to be asked whether what is called rheumatic fever was one disease or a variety of diseases.

Dr. Wynn Williams said that the discussion had diverged a little from the original question—whether rheumatic fever was benefited or not by medicines. He had had several attacks of rheumatic fever, and had tried both the “do-nothing” and the alkaline systems of treatment; and was led to strongly recommend the alkaline plan. When there was effusion in the joints, alkaline lotions with laudanum, applied hot, gave much relief. His remarks were based on an extensive experience among country patients.

Dr. Wilks was more or less in accord with the authors, and thought that Dr. Handfield Jones was much of the same opinion. He had had a large experience in rheumatic fever, but he did not know the remedy for it. He had used all the various means recommended; and it was remarkable that all remedies were almost equally successful; he did not find that any were of no use. There was no one plan of treatment to be used successfully in all cases. The cases to which he referred were of rheumatic fever as the term is generally understood. The fact of a paper such as that which had been presented being brought forward, was of some importance. Four or five years ago, there was a discussion on the treatment of rheumatism; and if a non-medical writer to the Society had then suggested that rheumatic fever patients might recover without medicine, none could have contradicted him. But now by obtaining a knowledge of the natural history of the disease, physicians were on the road to its proper treatment. He did not believe that the cases described by Drs.

Gull and Sutton were cases of remittent fever. He considered the reading of the paper, as a contribution towards the natural history of the disease, an important fact in the annals of the Society.

Dr. Sibson would ask whether that treatment could be called "do-nothing" which consisted in keeping a patient in bed, supplying him with proper food, and guarding him from injury? A treatment based on the strict observation of facts, and excluding all distinctly foreign elements, was doing more than giving alkalis, lemon-juice, or other drugs. Nothing was more easy than to prescribe on paper; but the physician must labor in constantly watching the patient and protecting him from harm. Behind all the various methods of treatment there was a common measure; and this was the rest, care, and nurture in hospital. During the last two years and four months, he had treated rheumatism without internal remedies, but with a care, attention, and nursing which he had never before bestowed on his patients. He had been led by observing relapses in consequence of allowing patients to get up too early, to keep rheumatic fever patients in bed for some time after they were free from pain; and this was a most difficult matter to carry out. Patients would get up and use their limbs, and consequently had relapses. In his treatment he aimed at securing absolute rest from movement. The patient was kept in bed, with the affected limbs wrapped in cotton-wool, and a cradle was placed to relieve him from the pressure of the bed-clothes. He studied to relieve pain in every possible way in which this could be done. He applied belladonna liniment to the joints; placed a pillow under the foot to prevent it from hanging down, etc. He did not think that this "surgical watching" of the patient could be called "do nothing" treatment. Mr. Hilton had called attention to the importance of rest in surgery; and it was of equally great importance in the medical treatment of disease. In speaking of the shortness of acute symptoms, we lost sight of an important fact. The great point was, to observe what tendency there was to inflammation of the fibrous structures of the heart. There could be no question that the valves and cavities of the heart were most worked, and more liable to be come affected; hence the value of rest and withdrawal of pressure. If there were much pain in the joints, with inflammation, he applied a few leeches; if there were no inflammation, a little morphia was injected sub-cutaneously. Regarding the use of peppermint-water, he was not sure whether it was right to pretend to give medicine. He had given medicine only for special purposes for more than two years, except, during convalescence, a little iron with quinine; and his patients were well pleased to be relieved from taking medicine. His mind was however, not made up as to which was the best treatment of rheumatism.

This had yet to be proved. We must go carefully and earnestly into the enquiry, and treat patients, not symptoms alone.

Dr. Billing said that Dr. Sibson's treatment, as described by him, was not in all respects mild; he used leeches, morphia injections, belladonna, etc. The management of the patient, as described by Dr. Sibson was the work of a nurse. Various modes of treatment were useful at different times.

Dr. Anstie said that the alkaline treatment of rheumatism had been regarded as a great boon, and there was a mass of evidence in its favor, which it was hard to get rid of. But before this plan was given up (though he had lost much of his faith in it) he would have its effects more carefully tested. He believed that it had fallen into disrepute with many practitioners from its effects not having been properly observed. A friend who was a very careful observer, had assured him that he took care to ensure alkalinity of the urine, and that his treatment was very successful. He thought that leeching might be discarded in all cases, and that small sub-cutaneous injections of morphia would be sufficient.

Dr. Leared would ask whether there was an essential acid in the blood in rheumatism. If it were lactic acid, there was a rational explanation of the relief afforded by alkalies.

Dr. Reginald Thompson spoke of the results of treatment of rheumatic fever at St. George's Hospital. In 1866 and 1867 there were 100 patients admitted, of whom 48 had heart-complication on admission, 21 became affected during their stay in the hospital, and 31 remained free. The average duration of the stay of patients in hospital was in 1866, 22 days, and in 1867, 26 days. The average duration of the cases with pericarditis was 46 days.

Dr. Habershon thought that Dr. Sibson's remarks on the importance of relieving pain deserved much attention. It could not be said of the measures used for the purpose—such as belladonna, opium, conium, etc.—that they cut short the rheumatic process. The great tendency to relapse has been overlooked in speaking of the natural history and treatment of rheumatism; and he was led to ask whether the means previously used had not induced in patients a greater liability to relapse, and whether patients who were kept in the best position for the remission of the disease were not less liable to relapse than those who had been treated by alkalies or other remedies. He thought that alkalies, when given freely in large doses, produced changes in the blood, and rendered patients liable to come again under treatment. Observations ought to be made not merely on a few cases, but for a long time, if we would estimate the

value of different plans. He thought he had seen much harm done by large doses of alkalis.

Dr. Dickinson, when registrar at St. George's Hospital, had witnessed cases treated in different ways. In 110 patients treated by various remedies, 35 had endocarditis or pericarditis after the commencement of the treatment. At the same time 47 cases were treated with large doses of alkalis (rendering the urine alkaline), and of these there was only one in which heart disease was discovered. The alkaline treatment would be, of course, given only in cases attended with much acid. He asked Dr. Sibson how many cases of heart-disease he had had among his rheumatic fever patients during the last two years.

Dr. Sibson replied he could not give the exact statistics, but that the number was smaller than in any previous similar period.

Mr. Macilwain called attention to a law of disease which he had observed, in reference to the connection of the site of disease and the interference with the general system.—*Medical Press and Circular*.

TREATMENT OF SCARLET FEVER.

Dr. Charles T. Thompson publishes in the *Lancet* a mode of treatment in Scarlet Fever, for which he claims many and great advantages. On the very first access of the fever, the patient is put into a warm bath, and this is repeated as often as the strength of the patient will allow, or the severity of the attack may require. He says: "The first effect of this treatment is to produce a soothing and refreshing feeling in the patient, to be followed soon by such an eruption on the surface, of so vivid a color and in such amount, as would astonish those who have never witnessed it. Thus one of the greatest dangers of this fearful disease—the suppression of the eruption—is escaped."

After the first or second bath appetite usually returns, so that the patient's strength may be supported by light and nutritious food. The excreta from the skin are removed as soon as deposited, thus avoiding the dissemination of the disease. Cuticular desquamation is greatly promoted.

After the bath the body should be dried by soft linen cloths, with as little friction as possible.

It is added that the irritation of internal organs is at once relieved by this treatment, and the various secretions are deprived of their noxious properties, thus removing additional sources of infection. Another advantage is that "a very serious case is soon reduced to a mild one, and the patient recovers in less than half the usual time."

Dr. Thompson states that during fifteen years in which he has pursued this practice he has never lost a patient from Scarlet Fever, nor can he recall a single instance in which the infection has been carried from the patient to any other person. He also asserts that the terrible sequelæ of of this formidable disease are seldom, if ever met with after the above mode of treatment.—*Medical Times and Gazette.*

HEMICRANIA OR SICK-HEADACHE.

BY SAMUEL WILKS, M. D.,

Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.

UNDER the name of cephalgia, or headache, are included several complaints, having their seat in different parts of the cranium and its contents—viz., the bones, brain, or membranes. There are also various kinds of functional and temporary headaches, associated for the most part with disorders of the abdominal viscera, or symptomatic of all forms of fever. It would be highly instructive to consider all these varieties, with their causes, and they will be necessarily alluded to under special diseases; but there is one form which I shall dwell upon for a short time because it is so common and peculiar in its nature that it deserves a place by itself, and because, as far as I know, a good description of it has not yet found its way into Medical literature. The reason of this omission probably is that Medical men have cared little to make such a study of a mere functional disorder as they would of a more marked or tangible malady, and perhaps also because, personally, they have had no conception of the symptoms attending it. I once knew a very eminent Medical man of the melancholic temperament, who told me he had no conception of what was meant by the term headache. I am sorry to say that this is not my case, and therefore I take this opportunity to draw your attention to a malady the particulars of which are, for the most part, gathered from personal experience. I am alluding to the affection popularly known as sick-headache, or technically as hemicrania or migraine. Like many other complaints, it is hereditary, and in a most marked degree. Thus it is a complaint met with in members of particular families, and transmitted from father to son, whilst there are other families of different temperaments in which a headache is unknown. All the members belonging to a particular family may suffer, both male and female, and therefore the complaint is not to be considered as indetical with the *clavus hystericus* although the latter, I have no doubt, owns the same immediate cause. This might be included with hemicrania under the term nervous headache; but if, because styled hysteric, it be regarded as a trifling disorder

der, there can be no doubt that the true hemicrania is a reality of the gravest kind, unfitting its victim, while it lasts, for all the avocations of life.

Being so frequently associated with stomach disturbance, it is often styled a sick headache; head and stomach disorders standing in the relation of cause and effect, though constantly changing places. Remembering, however, that the gastric disturbance is often greatest when the primary cause is in the brain, the term hemicrania is not an unfit one; for, as a rule, although the pain may reach far over the head, it is most usually fixed to one spot, or is more concentrated on one side than the other. It may commence as a dull pain over the forehead, then, as it increases, pass down to one eye, and so to the temple, where it remains fixed. Exceptionally the pain is at the top or back of the head. The pain is sometimes so violent as to deserve the name of neuralgia, but generally it is somewhat duller and of a most sickening character. Its great peculiarity is the throbbing that occurs with each beat of the heart, aggravated by every movement of the body, and more especially of the head itself. The movements required for washing and dressing on rising can scarcely be endured. The sufferer walks slowly, since everything which tends to make his arteries beat a degree more violently adds to his misery; in his head he perpetually hears or feels "throb," "throb," "throb," and his only relief is to support the head against a pillow or rest it on the hand, and avoid all possible excitement. His whole attention is distracted by the painful throbbing; and he becomes utterly incapacitated for business; every movement, every word spoken aggravates the pain. His only desire is to be let alone and be unspoken to. During this time he looks exceedingly ill, very pale, with a dark margin round the eyes, and the pupils contracted; there is a general feeling of chilliness over the whole body, excepting the head; the pulse at the wrist is feeble, whilst that in the head is strong. The anorexia is complete; the loathing of food so great that it is often impossible to swallow a single mouthful of food, and sometimes there is actual vomiting. In a bad attack the stomach generally refuses food for twenty-four hours. There may have been no error of diet to account for the attack, nor any constipation of the bowels, as is often thought; although a disturbance in these parts is often one of the symptoms of the complaint. The duration of a bad attack is generally several hours. If the person awakes with it, the headache persists during the day, and it is only after another night's rest that he rises free. If it should come on during the day, it gradually increases in force, and then the night brings little comfort, for the throbbing, aching head entirely precludes sleep. When the attack is less severe, there is, fortunately for

the sufferer, a strong disposition to slumber—he lays his head against any surface, and readily sleeps. I have observed in my own case that if, during the evening, I feel sleepy, and on lying down, very quickly become insensible, on the following morning I rise with the headache. How far the sleepiness induces the subsequent attack, or how far it is a mere symptom of the approaching disorder, I am uncertain, but I am inclined to think the latter.

Now, as to the cause of this misery, I have already said that whilst the body is cold the head is hot, and that whilst the radial artery is small the carotid is full; in fact, if the term determination of the blood to the head is applicable to any malady, it is assuredly to this. This irregularity in the circulation due to nervous influence has created much interest of late years, as I have already told you in describing various diseases. It has been clearly shown that the bloodvessels are regulated in calibre by the sympathetic nerves, and that the supply of blood is immediately under nervous control. Now, in this complaint of which I am speaking, the carotid on one side with its branches is dilated, throbs inordinately, and sends too much blood to the brain and its coverings. The fact I knew when quite a boy, for when leaning my head on my hand I distinctly felt the increased size of the throbbing temporal artery on the side of the pain, which would be sometimes on the right and sometimes on the left side. I remember mentioning the circumstance to more than one Medical man, and they received the statement with incredulity. I knew it, however, to be a fact, nevertheless, and am sorry to say I have been too fully aware of it up to the present day. The fact is, that in this dilated throbbing carotid and its branches lies the source of the trouble. The vaso-motor nerve on one side is for the time paralysed, the vessels of the head dilate, more blood is sent to it; and thus the increased heat, throbbing, and pain which the patient has to suffer until the tone of the nerve is restored. The most important question to solve is the immediate cause of the function of the nerve being thus temporarily in abeyance. Since a stomach derangement usually accompanies the hemicrania, it is very frequently thought that the source of the trouble is always gastric, and that medicine of a particular kind will relieve. That this is partially true is no doubt correct, but just as frequently the complaint arises from a direct influence on the nervous system. Besides, if arising from the stomach, the cause is not the same as that which operates injuriously in the mass of people from over-indulgence in eating and drinking, and which produces a more general headache in consequence, but the cause is a slighter one, and dependant upon a number of trivial circumstances which the sufferer himself alone could

detail. It may be said, no doubt with truth, that gastric derangements is a very common exciting cause in those who are subject to the complaint, but very frequently no cause for the attack is apparent, and certainly none attributable to the stomach. When the cause is evident, it is very often one which has acted directly on some portion of the nervous system, and to the non susceptible would scarcely be credited with so powerful an operation. Thus all worry, excitement, or overwork will readily produce a headache; walking in the sun is a very sure method of inducing an attack; strong impressions on the olfactory nerve, as the smell of paint, and in some persons the odour of spring flowers, also impressions on the retina, as long use of the microscope, or a protracted visit to a picture gallery. An atmosphere overcharged with carbonic acid is one of the most fruitful sources of headache, as that of a crowded assembly-room, and what would affect myself at once and in the most intense degree would be the presence of unconsumed carbon from candles or lamps. Loud noises in the ear will also cause a headache; and, in fact, it would seem that a strong impression made upon any part of the nervous system is sufficient to induce an attack. Probably derangements of any organ might also bring it on, as of the stomach, which we constantly see, and in women the uterus, more especially at the catamenial periods. Some of the most violent attacks which we witness are in women at these periods. There are those who are doomed every month to an illness of a few days, with intense headache, prostration, and sickness; if there be much uterine pain, the case is styled one of dysmenorrhœa, and the cause attributed to the uterus, which may or may not be true. Those, both men and women, who are thus liable to these violent headaches are proscribed many of the pleasures of life, since irregularities of any kind are so apt to lead to their wonted complaint. Under the most favouring circumstances, however, it is my experience that they can never escape an occasional attack.

As such trivial causes are sufficient to induce an attack of this hemi-crania or migraine, it might be supposed that some equally slight circumstance might be sufficient to counteract or cure it. I should think it probable that such is the case, although, after long searching for the remedy, I have not yet discovered it. Certainly the ordinary aperient doses which the Medical man so commonly prescribes for a headache are useless; besides, the attack may have spontaneously subsided before there could be any expectation of a result from the medicine. The act of vomiting, however, does in some cases afford very speedy relief. This is not by getting rid of any crudities, for the stomach may be empty, and therefore the effect must have been through the nervous system. As re-

gards stimulants, as a rule they cannot be prescribed; they often aggravate the complaint to an intense degree, although I have found that in some milder cases a little brandy-and-water or a glass of champagne has, after a short period, been apparently beneficial; sometimes a cigar. Of all remedies, perhaps tea is the best, but I am not quite certain what amount of benefit is to be ascribed to the tea and what amount to the hot water. Tea, of course, is well known to have a direct and marked action on the nervous system, and thus it might appear absurd to raise a doubt as to its efficacy did not I know more than one person who obtains more relief for a headache by sipping very hot water than by any medicine which has ever been prescribed.

Those who have any knowledge of the perpetual and horrible throbbing in the brow or temple, also know that nature prompts relief by pressure on the aching part. The leaning the head against the hand or other object is in obedience to what instinct dictates. On lying down, the aching brow is always pressed against the pillow. By more direct and intentional pressure a more marked relief is obtained. Thus, a pressure on the carotid in the neck will produce a suspension of the throbbing and the pain, but the effect is only for a time, as the blood apparently soon finds its way to the head by other channels. Although the use of pressure may at the present time have a show of reason, it has no doubt always been adopted at the dictate of nature. It is probable that Medical authors may allude to the method, but we need only go to our own Shakespeare, who appeared to be possessed of universal knowledge, to lead us to the belief that it must always have been in common use. Thus, in the scene between Hubert and Arthur, in *King John*, when the latter is petitioning for the preservation of his eyes:—

“When your head did but ache,

I knit my handkerchief about your brows.”

Also, as you know, in “*Othello*” the main feature of the play lies in the loss of a handkerchief, which Desdemona produced for the object I have been mentioning.

Desdemona. Why do you speak so faintly?

Are you not well?

Othello. I have a pain upon my forehead here.

Desdemona. Faith, that's with watching; 'twill away again:

Let me but bind it hard, within this hour

It will be well.

Then, again, besides pressure, the application of cold gives relief, as a wet cloth bound round the temples. I have already alluded to the effects of cold and heat upon the nerves, and the resultant influence on the blood-vessels; thus, cold is said to depress the action of the nerve-centres.

or ganglia, and heat to excite it; consequently the former would be used when we wished to remove nerve stimulation and cause a greater flow of blood, whilst heat would be used for a contrary purpose to check hæmorrhage—at least, I believe it is said, for example, that heat to the spine will repress hæmorrhage from the uterus, whilst cold would produce warmth in the extremities. However this may be, and supposing the theory true, there may be immense difficulties in the way of making the application to the appropriate part; it is cold, and not heat, which affords most relief in this form of headache. It may be that the cold acts directly on the vessels to constrict them, and thus causes their diminution and lessened blood-supply.—The object required is to lessen the size of the vessels, for it is certain that whilst the pulse at the wrist is low, and the whole body inclined to be cold, the head is hot and throbbing. As the cause is nervous, our agencies should be directed to the fountain-head, and thus it is by no means improbable that something may be discovered which may have the power of stimulating the sympathetic in the neck, and cure the malady. For this purpose various remedies have suggested themselves, and I am not sure that in nux vomica some efficacy may not be discovered. Theoretically galvanism to the neck or head would be beneficial. I have only used it a few times, and with some success.

The immediate seat of headache is not known; various opinions have been given. Many have denied that it is in the brain itself, seeing that the organ may be diseased in various ways without pain being present. Some have considered that the pain resides in the dura mater, and occurs through the branches of the fifth nerve which are distributed to this membrane. Briquet, who has in his investigation of various hysterical conditions shown that many local pains are in the muscle, or myalgic, considers that headache is of the same kind, the seat of it being in the temporal and occipito-frontalis muscles. I suppose that one's own feelings ought not to influence the judgment; otherwise it would be thought that the pain is situated in the very depths of the brain itself.—*Medical Times and Gazette*.

FATTY-STOOLS TREATED WITH PANCREATINE.

Dr. Langdon Down mentioned a case of a man, æt. fifty-two who had been passing a large quantity of fat by the bowels. The man came under his care on the 22nd of September in last year. He learned that he was a native of Boston, and had been suffering in this way for two and a half years. He attributed the affection to having caught a cold while residing in the Fen districts. Ever since then he had been passing fat like matter of the consistency of bee's wax. Many years ago he fell from a ship's mast

but got quite well again. He was now carrying on the business of a green-grocer: but latterly he has been so ill that he intended to give up business. He had lost two stones in weight. The fatty-looking material passing from him had a strong faecal odour. It was soluble in ether, and was saponified by caustic potash. Careful examination both chemical and microscopical, proved the existence of fatty acids. The urine had a high specific gravity, and contained numerous crystals of oxalate of lime and uric acid. It moreover contained a small quantity of sugar, and he passed four to five pints daily. A year since he had been a patient for five weeks in St. Bartholomew's Hospital under the care of Dr. Farre. His parents had both lived to an old age. Careful examination was made of the abdomen but no evidence of tumour or enlargement of the pancreas could be found. The man complained of present weakness, of pain in the back, flatulence, and altogether was so demoralized, that he quite despaired of getting well again. At first quinine was given, but without any diminution of the fatty stools. On the first of October Dr. Down prescribed for him seven and a half grains of pancreatic extract with the same quantity of malt dust three times a day. The improvement was immediate. The number of stools fell to two per diem, and gradually lost their fatty character, while the sugar disappeared from the urine. At the end of November he had only one stool a day, of normal consistence and character. The man so gained in health and spirits that he was with difficulty induced to remain in hospital. He at length returned to Lincolnshire, taking with him a month's supply of pancreatic extract. At the end of the month he reported himself in perfect health, and that he had reached his maximum weight. He then left off the treatment, and Dr. Down had just heard from him that his health continued good. During the period of treatment he had been placed on plain diet, and all stimulents had been disallowed. The weight gained by the patient had averaged two pounds per week; one week he gained as much as five and a half pounds. There were several points of interest to which Dr. Down wished to call attention. The case seemed to be just one to test the value of pancreatic extract in imulsifying fatty matters in the intestinal canal, and the truth of Corvisart's statement, that the pancreatic juice would be rendered inoperative by the gastric juice in the stomach. The case was also of interest in reference to diabetes. The co-existence of fatty stools with diabetes had been noticed by several observers. What the real nature of his disease was, it was difficult to determine. In all probability the pancreas was the organ at fault. The man was for a long time seriously ill and had been under varied skilled treatment, and Dr. Down therefore felt that the immediate and continuous improvement under the exhibition of the pancreatic juice must be regarded as other than mere coincidence.

In answer to various questions, Dr. Down said he felt a difficulty in accounting for the persistent good health after the discontinuence of the remedy. It was continued to the end of December. He had heard from the man about ten days since, when he stated that he was in good health and normal weight. He certainly was surprised to find him still going on assimilating fatty matters after the pancreatine had been discontinued. He took care that the patient should not have a diet excluding fat. The pancreatic extract was always given half an hour after the meal, three times a day. The complexion of the patient was of a tawny hue, and therefore he had examined him with the expectation of finding a tumor. He had a woman under his observation who had a distinct tumor; she was being treated in the same way, with similar results, but he thought it probable that she would relapse if the pancreatine were suspended. In the case which he had brought before the Society there had been a complete discontinuence of the treatment for at least two months while the man had continued in perfect health.

Transactions Clinical Society of London at the Meeting, March 12th, 1869.—*Medical Press and Circular.*

Midwifery and Diseases of Women and Children.

ON THE DIAGNOSIS OF ACCIDENTAL HÆMORRHAGE FROM PLACENTA PRÆVIA

BY EDWARD CALTHROP, L. R. C. P.

The os uteri being unopen, and therefore a physical demonstration of the placenta impossible, any evidence by which we can determine between the two conditions mentioned at the head of this paper must be of value: I speak of the diagnosis of placenta prævia from accidental hæmorrhage in the latter months of pregnancy.

We all know, who have had experience in midwifery, the soft, velvety, hot feel of a gush of uterine hæmorrhage, when that takes place the hand being in the vagina. It is from the character of the discharge we are to form our diagnosis in the present case.

In a case of placenta prævia—say at the sixth month—the discharge, if any, is blood “pur et simple,” and on examination the vagina is most likely full of, or at least contains, clots. In a case of accidental hæmorrhage, the discharge is liquor sanguinis, and the vagina free from clots; and it is easy to understand how this is. The blood in placenta prævia comes directly from the uterine or placenta vessels, or both, into the vagina, and is there discharged as blood, leaving coagulations behind in the

vagina; whereas, in accidental hæmorrhage, the blood before being discharged, has to find its way to the os; separating the membranes as it comes down and depositing its fibrin, so that the discharge is liquor sanguinis, and the vagina is free from clots. How often, in a case of accidental hæmorrhage arrested and gone to full term, do we not find, on the placenta being expelled, a large mass of fibrin discharged with it (I have more than one in my possession, and have seen numbers). In like manner, after a confinement in which perhaps a small piece of membrane has been left behind in utero, serving as a nucleus, do we not find, the discharge "dirty water," as the nurse says, the uterus large above the pubes, and the patient weak and blanched; the fibrin is deposited, and the liquor sanguinis discharged; and the mass, if allowed to remain in utero, prevents the proper contraction of that organ, and is often the precursor of disease, retroversion, &c., and may account for the moles, "false conceptions," &c., so frequently described. But this is scarcely belonging to my subject.

Finding no mention, then, in any authority of this mode of diagnosis (one of many) between these most serious complications, and knowing, by experience, that it is fully to be relied upon, except in cases in which the placenta is very near the os, or the hæmorrhage very profuse, must be my excuse for publishing these few rough notes.—*Lancet*.

Medical Jurisprudence.

CARBOLIC ACID AS A POISON.

By JOSEPH G. PINKHAM, A.M., M.D., of Lynn, Mass. Professor of Chemistry and Toxicology in Berkshire Medical College.

Miss A. L., a young lady, twenty years of age, was troubled exceedingly with ascarides, which, not content with their normal habit, at the rectum, kept mygrating into the vagina, where they occasioned a distressing pruritus. Having tried, without avail, all the ordinary remedies, she took, on recommendation as a *dernier resort*, an enema of carbolic acid dissolved in glycerine. The amount taken was large. I think about 145 grains. Alarming symptoms came on almost immediately, and medical aid being near at hand, reached her in a few minutes. When first seen by the physician in attendance, she was in the act of falling from her seat to the floor. She rapidly became convulsed, delirious, and finally nearly or quite insensible. The surface was cold and moist, the pulse weak and flickering, pupils contracted and breathing stertorous. The case must inevitably have terminated fatally without the prompt and

efficient treatment which it received. Free injections of milk were given, and the sphincter ani ruptured to facilitate the discharge of the liquid. In this way the rectum was thoroughly washed out in a short space of time. The constitutional symptoms were, at the same time, combated by ammonia, camphor, and other diffusible stimulants. In about fifteen or twenty minutes a copious flow of limpid, colorless urine came on, which lasted several hours. The exact amount of urine passed was not ascertained, but it must have been enormous. Its odor was slight but peculiar, not that of carbolic acid, nor that of normal urine. No chemical examination was made. Under the treatment the patient soon began to mend, and when I first saw her, some two hours or more after the injection had been taken, she was reclining upon a sofa, with a flushed countenance, seeming very weak and in some pain, but perfectly conscious. A severe rectitis followed, which was readily controlled by appropriate treatment, and in a few days the patient was entirely recovered. It is well to remark that the ascariides were effectually destroyed.—*Philadelphia Medical and Surgical Reporter.*

MATERIA MEDICA AND CHEMISTRY.

ANTIDOTE FOR CARBOLIC ACID.

Next to the stomach-pump, in poisoning with this acid, the best antidote is large doses of olive or almond oil, with a little castor oil. Oil is a solvent, and therefore a diluent of carbolic acid, and may be used to stop the corrosive effect of the acid, when its action on the skin is too violent.—*Journal of Cutaneous Medicine.*

THE EXTERNAL APPLICATION OF IODIDE OF POTASSIUM.

Take of glycerine, 3j; iodide of potassium, gss; best yellow soap, gss. Rub up the iodide thoroughly with the glycerine, and then add the yellow soap. This application is very active in removing glandular tumors, &c. *The Practitioner.*

CONVENIENT VEHICLE FOR THE APPLICATION OF NITRITE OF SILVER.

At University College Hospital (London), they have adopted the plan of dissolving nitrate of silver in nitrous ether, it can then be spread with a camel's hair brush over a surface, and the ether immediately evaporates.—*The Practitioner.*

HOW TO DISGUISE THE TASTE OF QUININE.

Dr. R. W. PARKE, of Mobile, Ala., says that chocolate will completely disguise the taste of this medicine.

Let the patient obtain a few "chocolate drops" from the confectioner, and he can take quinine in solution without tasting it. Immediately after each dose is swallowed, put two or three chocolate drops in the mouth and chew them up, and the bitter taste of quinine will no longer be perceived. Chocolate, perhaps, would answer the same purpose, but I have not tried it. Any one can satisfy himself of the truth of the above statement by filling the mouth with a solution of quinine, and using the chocolate drops immediately after ejecting it. By this simple means, the solution of quinine can be used, when otherwise the pillular form would have to be resorted to. Oftentimes it is desirable to get the patient quickly under the influence of the remedy, which could not be done where pills are used.—*Med. and Surg. Reporter.*

MEDICAL NEWS.

Dr. Fenwick, one of the Editors of this Journal, sailed for Europe on the *Hibernia* on Saturday, the 29th August.

Drs. Dugdale, Brown and LaRocque, have been appointed health officers for Montreal, and the city has been divided in three sections, one of which has been assigned to each.

Dr. William Fraser, Professor of the Institute of Medicine, McGill University, returned from his European trip on board the steamship "Nestorian," which arrived at Quebec on Saturday, the 28th of August.

Dr. Bligh, a graduate of McGill College, recently received the appointment of Resident Surgeon to the Nottinghill dispensary—after a competitive examination among a large number of Candidates. On his being introduced to the office he discovered he was required to sign a bond—agreeing not to practice within three miles of the Dispensary, for the term of three years—after the acceptance of his resignation. He declined thus to bind himself, and at once resigned. He subsequently received the appointment of Surgeon to the ship *Sussex* bound for Australia, and sailed on her for Melbourne on the 28th of July.

Professor Syme has resigned the Professorship of Clinical Surgery in the University of Edinburgh, which he has held for nearly forty years. Failing health is the cause assigned. His resignation is a loss to the University, which is not easily repaired. Among the candidates the name of Professor Lister of Glasgow, is mentioned.

Of the last twenty-three cases of ovariectomy by Dr. Thomas Keith, of Edinburgh, all except one are now alive and well. The last operation was done in December, 1868.

Mr. Spencer Wells, in a note to the *Boston Medical and Surgical Journal*, gives the following statistics of his operations for ovariectomy:—1st 100 cases, 66 recovered, and 34 died; 2nd 100 cases, 72 recovered, and 28 died; 3rd 100 cases, 77 recovered, and 23 died.

A general mortality of 28 per cent.

ITCH.

Except sulphur is used properly in itch it is productive rather of harm than good. In recent cases we should apply the sulphur freely to the interdigits and wrists only, and apply soothing remedies to the general surface, because the eruption on the general surface is sympathetic, the scabi existing only about the hands and wrists. The sulphur is generally used a great deal too strong, one part to sixteen is quite strong enough. It is very commonly the case that the scabies is cured by the use of sulphur, but the secondary eruption is intensified. In such cases it is necessary to abandon all sulphur treatment, to give a bran bath, and use freely some soothing lotion, and the patient soon gets well.

CHRONIC GONORRHOEA.

Glycerine of Tannin.—The following injection is of great service in cases of gleet and chronic gonorrhœa:—Glycerine of tannin, three ounces; olive oil and mucilage, of each one ounce. If used in the acute stage of the disease it should be diluted with equal parts of mucilage.

HERPES ZOSTER.

(*Sometimes Syphilitic.*) In syphilitic herpes zoster the patches are located exactly as those of common herpes zoster, and are as clearly under the influence of nerve distribution. But these cases differ from the common herpes zoster in that the eruption is usually on both sides of the trunk and on other parts of the body. It may also last much longer than common herpes zoster does.

Canada Medical Journal.

MONTREAL, AUGUST, 1869.

Having just paid a visit to the Belmont Retreat, for the reception of cases of inveterate drunkenness and insanity, we propose saying a few words about this valuable institution. It is situated a distance of between two and three miles out of Quebec on the picturesque St. Foy Road. It stands back from the road some two or three acres, and the front of the house is so protected by large interlacing trees, that the inmates are quite removed from the gaze of the curious on the public highway. The house itself is a large, airy, comfortable and solid looking building, commanding from the windows in the rear one of those charming views so characteristic of the environs of the ancient capital. The number of inmates at present is about eight to twelve, but accommodation for double this number could easily be found, even with the building as it is at present, and additions to it could be quite readily made if required. It is intended of course only for those who are able to pay, through their friends, a fair sum for their maintenance during their stay. The house is surrounded by about thirty acres of farm land, which is kept under cultivation by the proprietor.

The "Belmont" was instituted by the present owner, M^r. Wakeham, five years ago, as it was then felt by him that there was a want in the community for such an establishment. Mr. Wakeham, was for some twenty years superintendent of the large Beauport Lunatic Asylum, and consequently from his very extensive experience in the practical management of the insane of every phase, was eminently qualified for undertaking the management of such an Institution as this. The strictly medical part of the treatment of the inmates, is under the able supervision of Dr. William Wakeham, a graduate of McGill University, and subsequently a successful and popular practitioner in Leeds, Megantic. The Doctor, we are well aware, has made a special study of the subject of insanity for many years past; his inaugural thesis indeed, on this very subject presented to the Faculty on graduation (now several years ago) was received with commendation for the originality and research evinced in it. Now under such a management as this, we think that this estab-

lishment presents to persons in the Dominion having relatives or friends laboring under curable insanity, or the victims of irresistible and continual drunkenness, such advantages as should command for it at once their approval and patronage.

It is quite easy of access, and yet not so near the city, as to present too strong temptation to those who are at liberty; its managers are men, than whom none better fitted could be found in the country; the situation is everything that could be desired; the charges are extremely moderate; and finally, and what is perhaps the most important practical point, the results of the cases treated so far have been exceedingly gratifying. The mode of treatment of the inmates is that which has been found most successful in the States, in dealing with inebriates, viz: invariable kindness and absence of all physical restraint (except in delirium tremens, or other cases imperatively demanding it) but rather, by gaining the confidence of the patient and by making him thoroughly in earnest for his own cure, he is led to co-operate most fully with his superintendent. We believe that the good effected in such an establishment is very great, but at the same time its sphere of usefulness would be greatly increased if the friends of men of confirmed drunken habits could be induced to send the latter to the "Retreat" before it is too late *i. e.* before the habit has become perfectly *incurable* (for there are such cases) or else they die of delirium tremens. The people of Canada have hitherto been in the habit of sending their friends to different asylums in the United States; such as that at Brattleboro', or Binghampton, but we certainly think that since we possess such an institution as the one we have described, all Canadians should prefer before any other this Canadian Establishment.

THE ONTARIO MEDICAL COUNCIL.

It is an old but nevertheless a true saying, "If you touch filth it will stick to you." This was suggested to our mind in perusing an article which appeared in the Dominion Medical Journal, at page 225 taken from the *Toronto Globe*. In that article the writer indulges in a great deal of twaddle about the three rival schools, and applies to legitimate medicine, the term, usually employed as a term of opprobrium, of allopathists. With regard to the article itself it is one sided and without pointed argument, and is therefore not worth the trouble of refutation. The writer is evidently not quite convinced that his pet scheme, the present act, which regulates the study of Medicine in Ontario, is a success. Without doubt, the acceptance of that act by the present members of the Medi-

cal Council, is a fact which is indisputable. What the action of the profession in Ontario, independent of the Medical Council, will be, we are unable to say, but we hope that such decided measures will be adopted as to render any opposition on the part of the Council as a body, futile and of no effect.

The profession in Ontario are passing through a fiery ordeal, and it is to be desired that they will come forth without a vestige of that sulphurous odour which clings to them now *ad nauseam*. The members of the legitimate profession have been deceived and their views and wishes set at naught by their representatives. We have read the opinions of many good and true members of the profession both by private letter and public document, which dissent, in toto, from the painful position into which they have been forced by their representatives. The profession have but one course to take, ignore the very existence of their Medical Council and go before their Legislature as a body of true but justly angered men, and force the amendment of those objectionable clauses in the present Medical Act by which many of them who have sacrificed years of time, and much of their hard earnings, in obtaining their profession, are placed on a par with quacks and charlatans and which latter enjoy equal privileges with them, although they never spent a dime in attendance on lectures, nor did they follow any specified curriculum; in some instances which we could mention, a governor's license has been obtained after a few days residence in Toronto, and after the expenditure of a few dollars in obtaining a certificate, termed one of qualification.

McGILL UNIVERSITY, MONTREAL.

We beg to draw attention to the advertisement, which will be found elsewhere, announcing a change of time in commencing the course of Medical Lectures in this University. This step has been decided upon in consequence of the action of the General Council of Medical Education of Ontario whereby the time fixed by that body for the examination of students has been changed from May to the beginning of April. As all students of medicine or graduates of universities, desirous of practising their profession in Ontario, are required by the recently amended act to present themselves before the central board appointed by the Medical Council for examination, it was deemed necessary in the interest of the students that they should not be forced to leave their college before the completion of the six months' course. Hence the University authorities deemed it advisable that the present course of Medical Lectures should begin on the first Tuesday in October, instead of the first Tuesday in November;

the six months course will be completed at the end of March, instead of, as heretofore, at the end of April. This alteration in the arrangements for the ensuing session could not be announced before, as the action of the Medical Council was not published until after their meeting in July last. Every means has been adopted by the University to make this alteration known throughout the Dominion both by advertisement and circular.

QUEBEC MEDICAL SOCIETY.

We take the following from the *Quebec Mercury* of Aug. 19, and trust that the sentiments expressed in the resolution may carry weight with the Profession in Ontario. With regard to our own section of the Dominion, we would remind the Quebec Medical Society, that our law is sufficient, and has been found to work well for over twenty years. Our school is in no way mixed up with exclusive sects, and by seeking amendment to the present act, we may fall into the trap which caught our brethren in the West.

“At a meeting of the Quebec Medical Society held on the 18th inst., at the Medical Faculty of Laval University, Dr. A. Jackson, President, and Dr. A. O. Hébert, Secretary, after the ordinary routine business, the following resolutions were carried unanimously:—”

Resolved—1st—That Dr. R. H. Russell be appointed delegate to represent the Quebec Medical Society at the approaching meeting of the Canadian Medical Association, in Toronto.

Resolved—2nd—That the Quebec Medical Society has seen with regret the decision of the Medical Council of Ontario to accept the position which has been imposed upon them by the Medical Bill passed at the last session of the Ontario Parliament. That this Society will support any bill presented to Parliament to modify the present law, and having for its object to separate our school from exclusive sects.

Resolved—3rd—That the delegate of this Society to the Canadian Medical Association be instructed to use every effort to carry out the object of the above resolution.

THE CANADIAN MEDICAL ASSOCIATION.

This Association meets on the second Wednesday in September, in the city of Toronto. An advertisement elsewhere informs us what arrangements have been made with regard to the transit of members and delegates. We hope to see a large attendance.

THE HEALTH OF MONTREAL.

The present summer has been the healthiest that Montreal has witnessed for many a long day. The bills of Mortality has ruled exceedingly low.