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CANADA
MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Chronic or Mummified Gangrene of the leg occurring during an attack of Acute Mamma.—Amputation—Recovery. By THOS. SIMPSON, M.D.

Miss —, aged 19 was seen by me on the evening of the 15th October ; three days previously she had been in attendance on a sick friend and since has felt weary and generally "out of sorts." She had been low spirited for eight or ten days owing to a comparatively trifling family trouble. At my first visit she complained of general malaise, loss of appetite, inability to sleep at night and seemed depressed and melancholy, speaking to her friends in a gloomy and sometimes confused manner. She complained of a dull aching pain in the region of the heart and a sense of oppression, and answered questions in a dejected, hesitating, unsatisfactory way. On an examination of the heart no organic disease or derangement could be discovered. Pulse 110, regular but small, pupils natural, skin cool, bowels tolerably regular, tongue slightly coated, menstrual flow (she is now unwell) has regularly occurred every three weeks, and is usually copious but without any other peculiarity. I am told that she has always been a healthy active girl, with a keen enjoyment of life, of a determined disposition and a more than average flow of animal spirits ; she is over the medium height, large boned and spare. The only departure from health since she was

H H

four years of age, when she had small-pox, was an attack, on two occasions some years ago, of hysteria induced by fright. These attacks were of short duration and the recovery complete. Her father—up to the time of his last illness being a hale hearty man—died at the age of sixty-two years, of congestion of the brain. Her mother is alive and in good health, aged sixty-four. It is well to mention here that during the second week of her daughter's illness she was suddenly seized late in the evening with a severe epileptic convulsion which recurred, with intervals of semi-consciousness, several times during the night. This is the only attack of the sort she has ever experienced and was no doubt occasioned by over exertion and want of rest added to her extreme anxiety on her daughter's account. She recovered completely on the third day. This seizure in the absence of a satisfactory family history, which could not be obtained, is of a certain value as regards her daughter's derangement. The patient has two brothers and one sister older than she, all of whom have always been healthy. She was ordered to bed, to be kept quiet and to have a dose of morphia at bed time.

October 16.—Slept comfortably for several hours during the night. Is much excited. Conversation disconnected and rapid. Does not complain of pain or any inconvenience. Answers questions rationally but immediately relapses. Pulse still rapid and weak. Pupils and skin normal. Ordered Potas. bromid. gr. xx. terindie.

17th October.—Consultation with Dr. Craik. Symptoms of mental disease all increased. Great excitement. Hysterical in character. Dwelling on love and kindred subjects. No sleep last night. Ordered Chloral hydrat. gr. xx. to be given at bed time if necessary to procure sleep. She continued much the same until the 22nd when violent mania was developed. It required the united force of three strong persons to restrain her and on the 23rd a strait waistcoat and bandages had to be used. She remained in this state until the evening of the 26th when the fierce delirium

abated. Though still in a great degree unconscious she was calmer; pulse weak and rapid. On the following morning I was summoned to see her and told that she appeared to be dying. I found her in a state bordering on collapse. Beat of the heart and pulse almost imperceptible. General surface, but especially the lower limbs, cold; voice weak. Hot wine was plied liberally during the day in addition to strong beef tea, and quinine and phosphoric acid were substituted for the bromide. Towards evening she rallied. On the morning of the 28th she complained of severe pain in the right foot, on examination it was found cold, and three or four pale purplish patches of small size were remarked on the toes and dorsum and attributed to bruises received during her struggles. There was no swelling or œdema. The purplish patches gradually coalesced, became darker in colour and ended in perfect dry gangrene of the foot, which retaining its shape became as hard and dry as horn. The subcutaneous veins of a darker colour than the surrounding parts could be distinctly traced as small hard cords. The dry gangrene extended above the ankle joint and merged into an ordinary slough at the line of demarcation which formed irregularly a little above the middle of the leg. The process occupied several weeks, during which the patient remained constantly insane, talking in a most incoherent manner for hours together, then breaking into snatches of song; sometimes tractable, at others fierce, and controlled with difficulty, attempting to tear and destroy everything within her reach; no lucid interval; no convulsion. Ordinarily there was no fever but at times there was a slight flush and temporary increase of temperature. Pulse always extremely weak and rapid, ranging from 120 to 140. Pupils natural. Muscular strength remarkable, considering the state of the circulation. Urine free from albumen. Fæces and urine passed in bed without notice. No menstrual discharge since the first week of her illness. Appetite capricious; bowels irregular; wakefulness. Towards the middle of December

she gradually sank into a low typhoid condition. The raving became muttering delirium. The tongue was dry and fissured ; sordes formed about the teeth and gums—everything pointed to a speedy dissolution. From this state she slowly emerged ; her mind began to clear ; she became cognizant to some extent of the state of the leg. Her appetite improved ; her sleep became natural ; the menses returned, and she made known her desire to evacuate the bowels and bladder. About the middle of January the gangrenous parts had separated from the living down to the bone, and the calibre of her mind might be compared to that of a child of six years of age with a certain amount of cunning added. The amputation was delayed until the 31st of January owing to the extremely rapid state of the pulse and in order to allow of improvement in her mental condition. On that day, assisted by Doctors Craik, Hingston and Roddick, the leg was removed at a point immediately below the knee joint. Chloroform was administered, and Esmarch's bloodless method successfully employed.

The stump healed slowly but without any untoward symptom and the patient is now able to sit up in an arm-chair. Her mind is still weak and capricious but there is every reason to hope, from the progress of the last month, for steady improvement.

The quinine and phosphoric acid treatment adopted on the 27th of October was continued until the end of December with occasional short intervals during which she refused to swallow medicine. Morphine in gr. $\frac{1}{4}$ doses was given at bed time and acted most beneficially, soothing the patient and encouraging sleep. The state of the pulse seemed to indicate the necessity for stimulants but on trial it was found that even a small wine glassful of porter had the effect of flushing her face and rendering her more restless and excited. The local treatment consisted in swathing the affected limb in cotton wool, and in gentle frictions to promote the circulation and endeavour to limit the gangrene.

The diet consisted of eggs, milk, beef tea, oysters and a quantity of fresh fruit, such as grapes, oranges and apples.

The precise cause of the gangrene in this case is somewhat obscure. Dr. Howard examined the heart early in the disease and was unable to detect any organic lesion. It was noticed that there was no arterial pulsation discoverable in the affected limb, even in the femoral at its upper part, whilst the pulsation in the artery of the opposite side was quite apparent. It was also remarked that the pulse in the right arm was extremely weak, being scarcely perceptible—a mere tremor—in the radial at the wrist.

Shortly before the operation, pulsation of the right femoral could be traced for two or three inches below Poupart's ligament—probably at the point at which the profunda is given off.

Dr. Craik who kindly saw the case with me on several occasions, noted these peculiarities. The circulation in the stump at the time of the operation seemed to be sufficiently active. The larger vessels were tied before the removal of Esmarch's elastic band, but on its removal two small branches situated in the posterior flap spouted vigorously.

Dry gangrene has been met with as a result of constitutional adhesive arteritis terminating in occlusion of the vessel at the site of inflammation or at a considerable distance from it, by the washing away by the blood of the fibrinous formations and their impaction in smaller branches—embolism. The arteries most liable to this form of inflammation are, it is said, the iliac and the axillary.

It is possible that the gangrene in the case under consideration was occasioned by the obstruction of the femoral artery to a greater or less extent by a fibrinous plug or fragments, originating in some part of the course of the iliac.

This case was reported and discussed at the last meeting of the Medico-Chirurgical Society.

MONTREAL, April 6th, 1874.

Case of difficult labour, failure to deliver with forceps. Version successfully performed. By T. HOWLEY, M.D., St. John, Newfoundland.

Perhaps the following case may be deemed of sufficient interest to your readers to render it worth publishing.

I think it offers a fair type of a class of difficult cases not infrequently met with in practice, and there can, I think, be very little doubt that many children are lost by the sacrificial operations in cases of moderately contracted pelvis, who might have been saved by a timely resort to turning where the forceps has been fairly tried and found insufficient to effect delivery, as advocated by Dr. Robert Barnes in his work on obstetric operations.

CASE.—Called out of town about six miles at 3 a.m., Dec. 18th, 1873 to Mrs. W., multipara, eighth pregnancy at about 40. On enquiry I learnt that she had always had difficult labors, having been on every occasion delivered instrumentally, viz: four times by forceps and three by craniotomy. She has two living children, both girls; had never brought forth a living male child so far. I found that the patient was very short, almost dwarfish in stature, and had evidently a contracted pelvis, though without any evidence of distortion or spinal deformity. Labor was in full progress, having got so far as the second stage, with strong and frequent expulsive pains; head presenting but not being able to enter brim. Having the previous obstetric history of the patient before me, I applied the forceps without delay after having chloroformed her, and succeeded in locking them without much difficulty, thus shewing: firstly, that the case was a fit one, for their trial; secondly, that the contraction of the pelvis was not excessive. I kept them on for over an hour using all the tractive force I dared, but without causing the head to descend or engage in the brim. I then came to the conclusion that delivery was not to be effected in that way, and in the absence of a consultation which was not easily to be had, I had to

decide between craniotomy and the attempt to deliver by turning. Having but recently been reading Barnes and been struck with his remarks upon the value of turning in similar cases, I determined to put them to the test, and accordingly, with a good deal of difficulty, succeeded in getting hold of a foot, and after long and exhausting efforts at length effected version. The liquor amnii had pretty nearly all escaped and the uterus was consequently closely moulded around the foetus, hence the difficulty. It was surprising how comparatively easily the head, which could not be either coaxed or forced through when presenting by its rounded globe, passed the contracted brim when coming base first. There was not certainly five minutes delay or detention of the head, and the rest of the labor was effected without trouble or accident.

Considerably to my surprise, seeing the hard usage to which it had been subjected, the child a full-sized male, showed signs of animation, and with care and a good deal of attention came to all right. The sex of the child, no doubt just made the difference in the size of the head which rendered delivery by forceps impracticable.

I have only to say further that mother and child did well and have continued so ever since.

The time occupied altogether in the delivery was four hours. The want of assistance is a great drawback especially where chloroform has to be administered and kept up for hours.

ST. JOHN, Newfoundland, April 8, 1874.

Correspondence.

(To the Editor of the CANADA MEDICAL JOURNAL.)

MONTREAL, March 28, 1874.

DEAR SIR,—In your issue for February, 1874, I find your editorial observations upon the article in the *British Medical Journal* of January 17, 1874, upon the "West

Haddon Tragedy." With the verdicts of the coroner's juries in the case I have nothing to say, the evidence put before a jury may be of two distinct characters, moral and medical, either of which may be sufficiently strong for the jury to come to a conclusion upon.

In this case it is upon the medical evidence that I wish to occupy a small space in your columns.

In your comments, you mention that "the family physician found a high temperature of body, and that this induced the Chemical expert, (Mr. J. D. Rodgers, of London) to state that he was of opinion that deceased had died from some volatile noxious substance, given to her immediately prior to death, but which he was unable to detect;" on reading this text, and your criticisms thereon which would be very just provided the text were correct, and on referring to the *British Medical Journal*, I felt there must be a mistake somewhere. I therefore wrote to my old teacher, and fellow labourer in Chemical science for an explanation of what seemed to me not to be the whole truth; from his reply received since your last issue, I make the following extracts: After giving the facts of the case as proved in evidence, constituting the moral evidence in the case, and which the jury took into their deliberations as well as the medical evidence, MR. J. E. D. RODGERS says, "under all the circumstances you will not be surprised at the exhumation. I found the œsophagus distended with the same matter as was in the stomach; I found no cause for immediate death, but I found morphia assuredly, but I could not estimate the quantity as I had to go over much ground, with little to work upon, and had nothing to guide me.

"What I said at the inquest was as follows: I have found no mineral poison whatever; I have found an alkaloid, a trace, and by that I mean a quantity that will enable you to determine the nature of the substance but not its weight; it is morphia, without a doubt; morphia would account for the symptoms on the Saturday but was

“ clearly not the cause of death. I have discovered no poison
“ to account for the immediate cause of death. That I was
“ not in a position to state what was, but that I considered
“ that the high temperature of the body militated against
“ the heart disease, being the cause.

“ Being asked if in the course of my experience I could
“ suggest any poison that could cause death, and after a
“ month not be discoverable? I replied,—that was a ques-
“ tion that I had hoped would not be put, for I had a great
“ objection to speculate as to the cause of death when I
“ had found no poison to account for it, but in answer I
“ said that a dose of prussic acid and certain other volatile
“ poisons would cause death and would not be discovered
“ after a month’s burial, but I added, I repeat that in this
“ case I have found no poison or trace of any poison, to
“ account for death.” His statement of evidence given by
my friend Mr. Rodgers materially alters the aspect of the
the case as far as the medical and chemical evidence as to
the cause of death is concerned, and also takes away the
basis of your criticisms thereon.

I crave space in your columns for the above to counter-act any injurious opinion your readers may have been led to form from your article upon the evidence of my friend, erroneously reported in the *British Medical Journal*. Whilst sympathizing with the unfortunate sufferers in this case, and observing the good old maxim, “ De mortuis nil nisi bonum,” we have still a duty to perform towards the living, to be just to them, and not blame the medical experts for foolish or knavish evidence which they did not give. By inserting the above in your next number you will do an act of justice towards my friend, and oblige

Yours truly,

G. P. GIRDWOOD, M.D.

*Prof. Practical Chemistry,
McGill University.*

Books Received for Review.

Clinical Electro-Therapeutics, medical and Surgical. A Hand-book for Physicians in the Treatment of Nervous and other Diseases. By ALLAN MCLANE HAMILTON, M. D., Physician in charge of the New York Hospital for Diseases of the Nervous System, Fellow of the New York Academy of Medicine, Member of the New York Neurological and County Medical Societies, &c. With numerous illustrations. New York: D, Appleton & Co. 8 vo., pp. 184.

The author tells us that "he endorses Electricity only as a very valuable remedy in certain diseases, not as a specific for all human ills, mental and physical." This statement certainly encourages us to receive the book with all the greater degree of favor, for nowadays the general failing with the supporters of electro-therapeutics has been to claim for electricity the possession of virtues far beyond those ever actually proven to belong to it. The pathology of diseases of the nervous system is confessedly often extremely difficult, and many of these being but little under the control of other remedies, from the commencement of the employment of electricity as a remedial agent, great things have always been looked for from it. Abused as this agent was at first, and as it is even yet by charlatans and imposters, its true and proper place in the practice of the healing art is at last gradually coming to be fairly and definitely settled. Everyone now admits the undoubted efficacy of the employment of this means in a variety of nervous disorders, but from the fact of little being taught about it either theoretically in our medical schools, or practically in our hospitals, manual treatises on the subject for the use of students and junior practitioners are especially valuable. It is divided into four parts, which treat respectively of electro-physics, electro-physiology, electro-thera-

peutics generally and special electro-therapeutics. The first three of these parts are compressed into less than one half the entire volume, the whole of the remaining portion being devoted to special electro-therapeutics. Under this head we are introduced to a great variety of diseases, almost all, of course, of the nervous system, either organic or functional, and the various modes by which they have been successfully treated by electricity are explained and illustrated. The chief affections thus treated of are the following: *paralysis*—central, spinal, peripheral, hysterical, infantile, facial, &c., besides allied diseases, such as progressive locomotor ataxy and progressive muscular atrophy; next, *neuralgia* in all its varieties, facial, cervicobrachial, sciatic, &c.; next *convulsive diseases*, under which heading we have chorea, Scrivener's palsy, epilepsy, tetanus, torticollis, &c.; and, lastly, we have two chapters on the surgical application of electricity by means of electrolysis and by galvanocausty.

Whilst agreeing generally with the statements made there are certainly a few expressions from which we must beg to dissent. "It is the general opinion of dermatologists now-a-days," it is said, "that skin diseases are simply neuroses. Newman and Bärensprung and others unite in this conclusion. Numerous experiments substantiate the truth of this assertion and have proved that nearly all skin diseases are amenable to electricity." Against this we think there is still a general feeling that many affections of the derma are produced by a process of inflammation, and many others by a condition of depraved nutrition, and not merely by such a disturbance in the normal state of the nerves of the part as would permit of their being called neuroses. No one will deny that such diseases as urticaria and Herpes zoster are of nervous origin, but we find the assertion of Dr. Hamilton too general and sweeping.

In these troublesome functional disorders, chorea, epilepsy, paralysis agitans, &c., our author has nothing encouraging to say, electricity having proved only of doubtful value in a very few cases.

The neuralgias and some forms of local paralysis are the affections in which electrical currents have produced the most satisfactory results.

A considerable number of cases which have fallen under the author's notice are quoted in illustration of the various points, but, considering his extended opportunities for observation in connection with the State Hospital for nervous diseases, we think they might have been considerably augmented, especially as it is professedly a clinical and practical treatise.

We cordially recommend this book to every one desirous of acquiring information concerning the applicability of and the modes of applying electricity in the cure of disease.

The Sphygmograph: its physiological and pathological indications. The essay to which was awarded the Stevens' Triennial prize by the College of Physicians and Surgeons, New York, April, 1873. Two hundred and ninety illustrations, by EDGAR HOLDEN, A.M., M.D., 8vo. pp. 169. Philadelphia, LINDSAY & BLAKISTON.

The field adopted by Dr. Holden is, as he himself remarks, pathless and virtually unexplored. It is but a very short period since the invention of the sphygmograph of Prof. Morey, and the observations recorded having as yet been too comparatively limited, it follows that all the results here given are entirely original: and when we consider that we have presented to us nearly three hundred plates of pulsatile tracings, representing specimens from all conceivable kinds of disorders, we may form some idea of the amount of time and labor necessarily bestowed upon their investigation.

The Essay begins with a necessary description of the mechanism of the instrument. Dr. Holden's sphygmograph is a modification of that invented and used by Prof. Morey. In the latter the plate or surface which first receives the impulse from the artery is so arranged as simply to lie upon the vessel in close apposition with it, and to rise and fall

with every pulsation. Measurements of the *elevation* movement alone, are, however, according to Dr. Holden, quite fallacious. He believes that to get a correct idea of the real changes taking place in the blood-current in circulation, it is necessary to gauge the *expansion* movement of the vessel. In accordance with this view the author has contrived a spring, which, possessing a hollowed portion in its under surface, thus embraces the artery, and in consequence measures by its attached levers the amount of *displacement* which takes place at every cardiac stroke. Other minor differences there are between the two instruments, but only in matters of detail which do not effect the principle of their action. From this subject we pass to the consideration of the translation of tracings, wherein are explained the terms employed in describing sphygmographic writings, and the significance of each portion of the hieroglyphic. Every cycle which embraces a complete pulsation is divided into four *events* as they are termed, and it is upon the relative proportion, shape and other characteristics of these that depends the interpretation to be placed upon any given specimen. This occupies three or four chapters, and with one upon the compressibility or tension of the arteries, and the importance of ascertaining the exact character and extent of this, completes the first part. In part II, is then taken up the consideration of the normal character of tracings, and the deviations produced in them by disease. Great pains is taken by the author in the endeavor to establish the variations consistent with health, and the abnormalities produced by minor disturbing causes. Illustrative cases are then shown from patients suffering from a great variety of diseases, such as Heart-diseases, Delirium Tremens, Epilepsy, Asthma, Phthisis, &c.

Part III. is occupied by a series of drawings illustrative of the various effects produced upon the pulse by medicines, especially those of the narcotic type, and the whole is completed by several conclusions based upon the numerous observations made.

Up to this time this instrument has not been acknowledged as one of the diagnostic aids necessary for medical practice. But we believe that it is one that is yet destined to be of great service to medical science, and the thanks of all must be due to any one who gives time and energies for the accomplishment of this object. That its usefulness will not cease with its elucidation of various scientific physiological and pathological problems may also be fairly expected. It is not a mere toy for the amusement of the scientist, or the researches of the physiologist, but it seems to give promise of being a very valuable and faithful guide in many important ways, and in the most practical manner possible. Some of these our author has not failed to point out; for instance, he remarks, "It is at once evident, that could we satisfactorily determine the variations compatible with health, the sphygmographic record of an applicant for life insurance would be the safest record he could present us as a test of his condition, and this single feature could hardly fail to be of great pecuniary value in the country where the assurance of life is almost universal."

We cannot do better than conclude by another quotation from the essay itself. "The ability of any instrument to indicate the departure from perfect health, whether capable of indicating the precise character or not, would stamp it of practical value, just in proportion to its power to do this alone, or more certainly, or better than could be done by any other means. There are many reasons for believing that the sphygmograph will do all of these."

This study is certainly well worthy the attention of every physician wishing to keep up to the knowledge of his times, and we therefore cordially recommend Dr. Holden's essay, to the merit of which we have already borne witness, and which is confirmed by the bestowal upon it of the honorable Steven's Prize, by the College of physicians and Surgeons, New York.

The typographical part of the book is well executed, and the plates (white on black ground), are elegantly finished.

We are glad to learn that one of these instruments according to Dr. Holden's pattern has already been ordered from Boston for the Montreal General Hospital, for use by the Attending Staff and Clinical Classes..

Periscope Department.

An Address on Pyæmia in Private Practice. Delivered before the Clinical Society of London. By PRESCOTT HEWETT, F.R.C.S., President of the Society, Senior Surgeon to St. George's Hospital, &c.

(Concluded from April Number.)

Some time after the occurrence of this case, the late Dr. Bence Jones happened to mention to me that he had been summoned into the country to a young gentleman who was suffering from well marked pyæmia, without, as far as could be ascertained, any previously existing suppurating surface, I then told Dr. Bence Jones of the above case of pyæmia, after gonorrhœa, and begged of him to ascertain, if possible, if his patient was suffering from gonorrhœa. The patient died before Dr. Bence Jones saw him again, but at the post-mortem examination the existence of gonorrhœa was clearly proved. A third case of a similar nature, and in a young gentleman, was also mentioned to me by Dr. Guéneau de Mussy.

Such, gentlemen, are the cases of pyæmia occurring in private practice, to which I wished to direct your attention. They are twenty-three in number, and twenty-one of them fell under my own notice; the remaining two, the last being well authenticated, have been alluded to simply on account of their extreme rarity.

And now, if we proceed to analyze the circumstances under which pyæmia occurred in these twenty-three cases, it will be found that an operation was performed in six

instances only. In four of these (the first four) the operation was of the most trifling nature—a single-thread seton, a small wart on the heel, a small wart on the scrotum; a small sebaceous tumour of the scalp; and it was only in the remaining two that the operation was of a somewhat severe character—amputation of the breast. Moreover, the first four were all in different years, and not in the same locality. The last two were in the same year, and within a month of each other; but one was in town and the other in the country. And here let me note that the third case is also mentioned among those of recovery, this patient having had two attacks of pyæmia at several years' interval, and in different localities.

Of the remaining seventeen cases, in which no operation had been performed, there was a broken surface in eleven, and in six there was not even an abrasion. Of the eleven cases in which there was a broken surface, it was but small; in ten, ulceration of a small sero-cystic tumour of the breast, of abscesses in two, of tonsils in two, of bowel in typhoid fever in three, a needle broken in the leg, a small splinter of wood in the great toe. The eleventh case was the only severe one—compound dislocation of the elbow. The six cases in which there was no abrasion were—a slight injury to the foot followed by suppuration, inflammation of the lateral sinus and internal jugular vein in connection with discharge from the ear after measles, abscess after parturition, and gonorrhæa in three. Of these seventeen cases none occurred at the same period or in the same locality.

As to locality, of the twenty-three cases, sixteen occurred in town and seven in the country. Of the sixteen in town, all, with one exception—that of the young girl who, after running a needle into her leg, was admitted with pyæmia into the Hospital,—were in the best parts of the town, scattered about, in good houses, and in good sized, well ventilated bed-rooms, and well cared for, in fact, to all appearances, under most favorable conditions. The country cases—seven—were in different parts, and widely separated

from each other, and their conditions, too, were in all respects apparently excellent.

As to age, the youngest patient was six, and the oldest close upon eighty. Of the remaining twenty-one, eleven were between fifteen and twenty-five, and ten between thirty and fifty.

As to local treatment, it was out of the question in several of these cases; and in several cases, too, all possible care and supervision on the part of the surgeon would have been of no avail. Of the twenty-three cases, eleven were under such circumstances.

In conclusion, pyæmia, it has been said, is caused, for the most part, by hospital air, by foul air consequent upon the aggregation of surgical cases in the wards of our large hospitals; but pyæmia occurs also in cases, even when placed under the most favourable conditions—perfect isolation, large airy rooms in the country, with plenty of fresh air, and in every way well cared for. Pyæmia appears, too, at times to be connected with atmospheric conditions; several cases occurring without any apparent cause, at or about the same period, in different places. The two cases of amputation of the breast, which were within a month of each other, followed exactly the same course, one, however, being in town, and one a few miles out of town. And at the same time that these cases were under my care, other cases of pyæmia, which occurred in private practice at the same period, subsequently came to my knowledge.

Moreover, cases occur in which patients are apparently prone to pyæmia; the case of a gentleman who recovered from an attack of pyæmia, and a few years afterwards died of another attack.

The truth is, the causes of pyæmia are still to be worked out; and this, gentlemen, is a problem, the working out of which I would strongly urge upon the Clinical Society.—*Medical Times and Gazette.*

Observations on Hare-Lip and Cleft Palate. By SIR WILLIAM FERGUSSON, BART., F.R.S., Surgeon to King's College Hospital.

It may seem recurring to an oft-told story, to refer to hare-lip as giving opportunity of saying anything new or good on such a familiar subject. I fancy that, in my time, I have seen considerable changes for the better in regard to the treatment of such cases, that even now, after the experience of many hundred examples, I think that I can make some observations worthy of consideration. The operation for this malformation was one of the first I ever performed on the living body. It was done some forty-five years ago, and ever since I have taken interest in it, both in my own practice and that of others. I have repeatedly, in public hospital practice, operated on two or three cases in a single day, and I have read most that has been written on the subject throughout my professional life. It may perhaps, be claiming more than I am entitled to, to say that, prior to the publication of my first edition of *Practical Surgery*, there had been little written regarding the anatomical condition of this malformation. There were few men, if any, alive who could state positively, or could show by specimens, what was the nature of the substance of the intermediate hard material in the midst of the two gaps in the upper alveolar ridge, in the case of double hare-lip. It was not known positively whether it was single or double. So far as I know, it was never even conjectured how it was held in its place; its relations with the vomer were unknown. The number of teeth likely to be developed in it, or their future quality, were little thought of, and the mass itself was found, in most instances, to be specially in the way of any contemplated operation. Until within these few years, there was not a skeleton of such a part in any museum in this country, and, in as far as I know, the specimens presented by myself to the Royal College of Surgeons are still the chief, if not the only, examples of the kind in our anatomical museums. Our knowledge on most such

matters is now so precise, that the intermaxillary bones are now spoken of as familiarly as those in lower animals, whereas the actual condition of the human subject had rarely, if ever, been either described or demonstrated. The difference of connection or attachment, in the cases of single or double fissure in the alveolar ridge, seems to have been entirely overlooked; for there was no description which told how, in the double fissure, the intervening mass was held in its place solely by being suspended from the point of the vomer and the rest of the columna of the nose.

The development of the teeth in these cases has also, in my opinion, attracted less attention than in the normal condition of the upper jaw; but it is less my intention to refer to such anatomical and physiological matters than to some points in surgery, which I think specially worthy of notice as part of the result of my long experience in such cases.

First, as to the date or age when operations for hare-lip are most eligible, there is no doubt in my mind that an early period is now most preferred. The custom of delaying until after the completion of first dentition has now almost passed into abeyance and the once prevalent idea that infants were specially liable to fatal convulsions after such operations may be said to have faded away. Experience has shown that they may be performed with safety at any period from a few hours after birth. Even at that dreaded period, first teething, harm is no more likely to happen than at any other time, provided always that the child be in good health. My own favorite date is from three weeks to three months after birth. Healthy-looking children at birth often pine and languish within the first few weeks, especially hare-lip cases, and particularly if the palate be implicated. I think it best to wait in such instances to see that health flourishes. A few weeks will give the requisite proof, and then, for many good reasons, I am of opinion that an operation should not be further delayed. I have a strong impression, from my experience, that the older a

patient is, the more is the effect of the operation perceptible on the constitution, bodily and mentally ; and I am equally convinced that, if it be performed at an age when there can be no subsequent recollection of the circumstance, so much the better for all parties. The parents and others interested in the infant are almost invariably in an unhappy state of mind until the operation is satisfactorily over. Maintaining, as I do, that the younger the patient is after the first three weeks, the safer and better is the operation, I consider it disloyalty to surgery to delay such a decidedly advantageous proceeding on doctrines which will not bear the smallest scrutiny. I have learnt facts regarding such matters that may appear more akin to romance than reality. I have been asked to see an infant, a few weeks old, with a simple single fissure in the lip, and, on my advice, the operation has been performed shortly afterwards, with the best results. Then it appeared that there was an older child in the family in a similar condition, which had been secluded in the nursery attics for several years. Happily, the experience of this younger family event was the means of freeing the poor child from seclusion ; for those who had advised against the operation took heart of grace, and put the senior on a par with the junior ; as far as the operation went. I have known an instance of a child being kept in the recesses of the nursery for eight or ten years for a severe deformity of the kind. It was never allowed to play with other children beyond the family, it was never allowed to leave the house without the face being muffled in thick folds of veil ; and, for long, the neighboring nursery maids had the idea that this poor girl, whose face otherwise was unusually handsome, was an example similar to the lady, famous in nursery story, with the pig's face. The opinion previously given, in regard to this case, had been based upon great ignorance of what was going on in surgery during the life-time of the poor sufferer.

But, to come more closely to the purpose of this paper, being of opinion that the intermaxillary portion or portions,

is or are very frequently the cause of much annoyance to the surgeon, often, indeed, being almost the direct cause of failure in operations, I am desirous of recording my experience on this subject.

In the case of double hare-lip, with double cleft in the alveolar ridge, there may be great projection, or little or none. In the latter case, particularly if the columna and lateral portions of the lip be of good size, there may be no need for meddling with the intermaxillary mass. If, however, the projection be considerable, or what may be called great, and if the columna and side portions of lip be scanty, there ought then, in my opinion, to be no hesitation about taking away the projection at its junction with the vomer. The attempt to push this part back by gradual pressure is troublesome, or well-nigh impossible, in most instances, even if, as has been proposed, its narrow neck be broken. In either instance, it has never been told from experience in what direction, the teeth come in the part thus displaced. In either or both instances, I have no doubt in my own mind that the teeth, if they came at all, would so slope backwards as to be of no value either for show or for use. There is, however, indubitable proof that, without thus meddling with the part, there are only two incisors of respectable size, after all, and these are of such indifferent quality, that they had better have been dispensed with at the earliest date. I, therefore, never hesitate to remove the intermaxillary mass when it seems the least in the way of a satisfactory operation. The advantages of doing so seem to me greatly to preponderate, and, if there be cleft hard palate at the same time, there is far greater chance, in after years, of the gap becoming narrower, whilst in adult life, there will be greater facility for the assistance of the dentist. But I imagine, there is less hesitation or difficulty in the surgeon's mind in the case of capacious double gap, than when there is only a single one with considerable projection, of the intermaxillary margin. It is to such cases that the chief object of these observations is directed. If it be

difficult to apply compression on the intermaxillary portion in double cleft, it is still more so when only one side projects; for its base is broader and firmer. The instances where there is no special projection are common, and require no comment, as there is then, as regards this matter, no obstacle to a satisfactory and successful operation; but when there is a projection, if considerable, it is a more serious obstacle to these results than those inexperienced may imagine. I believe that this condition is a frequent cause of failure in the ordinary operation, particularly if it be done without the truss-compressor on each cheek to push the lateral portions of the lip towards the mesial line. In such a case, the surgeon is naturally anxious to leave the alveolar ridge untouched, and in accordance with a common practice, when it is desirable to secure union by first intention, when the stitches or needles are withdrawn, strips of plaster are carried from cheek to cheek to hold the union firm. Scarcely a greater mistake can be made, for, the line of union in the lip being generally, under such circumstances exactly over, or opposite to, the sharp angle of the projection of bone, the young cicatrix is pressed against it, and gradually thins away, until it is fairly split open, when the operation proves a failure. This I have a strong impression is an explanation of the failure of many cases that do not seem, in any special way, complicated. I do not mean that straps always conduce to this effect, and that, therefore, they should never be used. On the contrary, I have very frequently seen them of much service. But, if the single projection alluded to be conspicuous—in which case, there will always be a somewhat sharp, angular margin—it is, in my opinion, best to get rid of it at the time of the operation. In my own practice, I was at one time in the habit of cutting the projection away with sharp small bone-forceps, dividing gum and bone at the same time, and aiming chiefly at getting rid of the projection. This usually involved all the intermaxillary bone on that side, and implied, perhaps, little heed of what damage might be inflicted on the sound side,

although, latterly, I always passed the blades into the mesial line between the intermaxillary bones, so as to secure this side from material injury. In the course of my experience I fancy that I refined on this practice. I found that it was well to detach the portion as high up towards the nostril as could conveniently be reached, and here I discovered that, in all young subjects there was only cartilage to be divided. This could easily be done with the knife or scissors, and so, for many years, I have used only one or other of these instruments. Usually, I have passed the scalpel through the mucous membrane, under the frænum, up between the bones, and divided the cartilage, periosteum, and gum, to sever the part; and thus the use of cutting with the bone-forceps has been dispensed with, for, to say the least, such an instrument is coarse-like and clumsy in an operation for hare-lip on an infant only a few weeks old.

Whilst I can offer little objection to this proceeding, I fancy that I have recently fallen on one equally efficacious and void of certain objections which, I think might be urged against it. Instead of this sweeping wholesale abstraction, I content myself with making an incision, vertical, sloping, or horizontal, with a scalpel through the mucous membrane and periosteum, over the projecting piece of bone; with a few touches with a knife, or a little squeeze with finger and thumb, I so separate these tissues as to permit the entrance of a gouge of a quarter or three-eighths of an inch in breadth, with which I scoop out the body of the milk incisor-tooth in as far as it is formed, taking no heed of the cyst or of that of the permanent one, and even cut out such wall of bone as may be there; usually, at four or eight weeks, only small plates of bone. In this way, the hard projection is removed, and the tissues that remain offer no obstruction to the union of the junction of the lip in front, whilst the operation, as it appears to me, is less destructive, therefore more conservative, in character. There is thus left only the mucous membrane, with possibly some periosteum, which forms a soft cushion behind the

wound in the lip, and so the remaining intermaxillary bone is not divested of covering so thoroughly as when cutting instruments are passed in the mesial line to take all away on the offending side.

I have now adopted this plan in several cases, and have been much pleased with the effect and result. In one instance, I used a silk stitch to hold the edges of the wound in the mucous membrane together, but I doubt if it be needful, and I have not seen any spurt of blood from the deep part of the wound, such as that which I have often found, in other instances, has required the application of a pointed heated cautery. The wound has healed without attracting special notice. In the case where the stitch was used, the thread came away spontaneously, and, in the end, the gum appeared as if there had been no projection, and, therefore, no such operation.

It is now more than thirty years since I proposed the application of the practice of myotomy in the operation for cleft palate. Excepting in a few instances, objection has never been taken to the theory. There are instances where division of the levator palati muscles need not be resorted to, and union may with confidence be anticipated, but these are the exceptions; and doubtless it is owing to this preliminary step, that I can boast of a success well nigh equivalent to the usual result in hare-lip operations. Half-a-dozen instances of non-union are all that I can number in between two hundred and three hundred operations. The result contrasts favourably with that of Roux, who, as is recorded, was well content with success in two out of every three cases on which he operated—amounting to about one hundred and twenty operations in all. My theory, I maintain, is as sound as that in the operation for strabismus; yet I congratulate those who have succeeded without its application, and I freely admit that there are instances where the operation may and does, succeed without this preliminary to the ordinary process. Since the above date, when I drew attention to the remarkable success of Dr.

Mason Warren and some other American surgeons in this operation, particularly that of Warren, in dealing with cleft in the hard palate, I am not aware of any material modification in regard to the mechanical process of closing the cleft in the soft palate, but in cleft in the hard palate there have been many; and, in other matters respecting the operation, I know of no more interesting story than that of the gradual steps of improvement which have taken place in regard to this operation, within my own experience of professional practice.

In early days, more than forty years ago, I believe it was the custom, in all cases, for the surgeon to sit or stand in front of the patient, with a light on the palate as favourable as could be secured. The strain on the surgeon's neck back, and hands, was considerable; but, worst of all, he usually got his face so bespattered with blood that his features could scarcely be recognised. In the course of time, the operator gradually edged to the side, until, like the dentist, he came to do his work standing on the patient's right side, whereby he avoided the splutter incidental to such a spasmodic ordeal as the patient was of necessity subjected to. In my own practice, I soon preferred the recumbent position for the patient, whilst standing on his right hand. Every facility was given to sit up, spit, and gargle with cold water. The necessities for both these means of relief seemed urgent; more so, perhaps, in the operation which I myself practised—viz., the division of the levator palati muscles—a step which induced a more free escape of blood than simply paring the edges of the gap. Then came two inestimable advantages—introduced by Mr Smith of St. Bartholomew's Hospital—the gag and chloroform.* The association of these two agents seems imperative; and, by their aid, Mr. Smith proved that the

* An admirable paper on these adjuncts was written by Mr. Smith in 1869, and published in the 51st volume of the *Medico-Chirurgical Transactions*.

operations on the palate could be performed in childhood as readily as after puberty. With such adjuncts, I have myself operated at all ages, from one year up to adult life. Chloroform without the gag would be worse than useless; the gag, without chloroform, would, in my opinion, add to the sufferings and miseries of the patient. Until I recognized the advantages of the gag, I supposed that the operation under chloroform would be specially hazardous; but when I found that, with the use of the gag, the blood could be readily sponged away, and the proceedings otherwise much facilitated, I fancy that the operation had reached a stage of perfection which left little to be desired as regarded art and science. With good assistants, skilled in chloroform, the use of sponges, and otherwise, it seemed to me that little was left for the surgeon to devise in regard to this difficult and formerly painful proceeding.

I claim to be the first in this country to have drawn special attention to Dr. Mason Warren's method of dealing with fissure in the hard palate. The proposal of that surgeon to peel the soft tissue off the bone on each side of the fissure in the hard palate has been extensively acted upon with varied modifications, but with very indifferent success. For myself, I may say that I have tried perhaps every plan that has been suggested, but I have been sorely mortified with the results. Some cases, after one or more operations, have turned out admirably; but in a large number the result has been such as to have made me despair of closing these openings by operative means. There are instances where such hopes should never be entertained, owing to the wideness of the gap and configuration of the parts; but there are probably as many as one half of the cases amenable to operation which have such slight deficiencies in the hard palate, that I have always acted on the idea that closure in the mesial line would or might be effected here as in the soft palate. Experience led me to give up the plan of Mason Warren of trying to close the gap in both soft and hard parts at the same time, even in instances

where the defect in bone was but slight, For many years latterly I have ceased to meddle with the front part of the gap where the bones have been implicated, reserving the attempt for a subsequent operation ; but, to facilitate the approximation of the margins of the soft palate, I have often followed the plan followed by Roux, of making transverse incisions, so as to divide the soft parts from the posterior margin of the osseous palate. Whilst I have had reason to feel satisfied with this step, I have in no way found my efforts to close the hole in the hard vault more successful. From time to time, on subsequent operations for the express purpose of closing such openings, I have been highly satisfied with Mason Warren's plan of separation—that of paring the soft tissue from the hard, by working from the margins outwards to the alveoli, sometimes, in addition, making the lateral incisions proposed by Mr. Field of Brighton, or by making these lateral incisions first, and separating the soft tissues towards the mesial line. In some instances, I have had good results from a sort of gliding process, facilitated by separating the front end of one of the flaps from its connections ; but, altogether, the success of these operations has not been equal to my anticipations or desires. Since using chloroform, I have been solicited by patients, again and again to try further operations, but the results have led me to give little encouragement to such proceedings. Latterly, however, a dawn has opened on my hazy views in this respect ; and my chief object in putting these observations on cleft palate together is to draw attention to my latest experience on the subject.

My impression is, that the frequent failure in this latter kind of operation is induced by the contraction of granulations, whereby the lateral portions are so drawn towards their original positions, that the union in the central line is either prevented or broken, and thus the gap remains when the side-flaps have resumed their original positions. An idea came into my mind years ago which, however, I thought so wild, that I could not dare to bring it into practice.

Repeated failures, however, by usual methods, brought it more forcibly into my thoughts, and I at last resolved to put it into execution. My project was that, instead of making the separation between the soft tissue and bony palate, for a quarter of an inch or so, I should divide the palate, soft tissue, and bone, about a quarter of an inch from the margin of the gap on each side, cutting the soft tissue on the roof of the mouth with a scalpel, and the bone, with mucous membrane above in nostrils, with a chisel, by means of which I could push the margins towards the mesial line; so that, having been previously made raw by removing the mucous membrane, they might be brought into apposition and held so by stitches.

This project was carried into execution in King's College Hospital on November 22nd 1873, in the following manner.

J. H., aged 18, had the soft palate closed two years ago; a small aperture remained in the hard, which had been twice operated on unsuccessfully by the ordinary proceeding:


The patient was placed under the influence of chloroform, and the mouth held open by Wood's gag. The (1) aperture was about this size; the edges were made bare by dissecting off the mucous membrane; then, by means of a small scalpel, an incision was made on each side to this extent (2). The back part of these wounds penetrated the soft palate, and in front they were close to the bone. Then the point of a chisel was forcibly, but carefully, pushed upwards through the bone into the nostril through each wound, and, by slight (2) lateral movements of the blade, each lateral portion could be readily made to meet the other in the mesial line, where the retracted margins made at first could be placed in apposition. The parts were then held together by a single stitch introduced in the usual way, passing on each side, through the soft tissue, so that it might remain steadily in one place. At the conclusion, the conditions seemed much as after the operations formerly effected. Subsequently, granulations filled the lateral gaps as on previous

occasions ; but, when the stitch was removed, union in the centre seemed firm, and was not disturbed by any dragging power, such as I supposed had, in earlier operations, drawn the flaps upwards and outwards towards the bone. The result was perfect, and I have heard nothing to the contrary since the patient left the hospital. On the same day, I

O repeated similar proceedings on a patient who had had a successful operation on the soft palate, but on whom I had been unable, after four different attempts, to close (3) a fissure in the hard. Here the opening was larger, being about this size (3). Similar steps were followed, and, to all appearance, during the first eight days, with similar results. Two stitches were employed, but, on removal, the edges, where one had been, seemed to fall asunder. Two days afterwards, a new stitch was put in, by means of an ordinary aneurism-needle, and the margins made raw by a gentle scrape. The hole was thus closed ; and, on removal of the stitch, eight or ten days later, union was perfect. Since this patient left the house, a small separation has taken place, which has left an opening a little larger than a probe. I have recently had made, by Matthews Brothers, a modification of a most ingenious needle suggested long ago by my friend Mr. Brooke of Westminster Hospital, for introducing stitches into the soft palate in operations on cleft in that part. The point of his needle was sharp ; and I have often used it with much satisfaction. The point here, is blunt, like that of a common aneurism-needle.

Soon afterwards, a third case came under notice in private practice, wherein, after closing the soft palate, I had failed to succeed with the hard, by the ordinary proceeding. Here the opening was midway in size between the cases above related. The steps were much the same as in the first, excepting that I passed the thread through the lateral apertures without fixing it in the soft tissue. After the knots were tied, they never slipped from their position. These were left some days longer *in situ* than in the previous cases, and on removal union in the mesial line was perfect. This union I have recently heard, remains perfect.

A fourth case has recently come under my care at King's College Hospital. The gap here was larger than in the three preceding cases. It was an inch long, by more than a quarter of an inch wide. The lateral incisions were of proportionate length, and when the parts were brought together, a gap into each nostril was visible. Here three stitches were used, and, as in the case last related, they were passed through the side incisions, without piercing the soft tissue.

A fifth case is now under notice. Here the ordinary operation was performed on the soft palate in June 1873: and the front part, which involved a small portion of the hard palate, was left untouched, in the conviction that it would be better to leave it alone until a future date. The aperture left was at the end of the healing process, of this size. Here the scalpel and chisel were used as  above described, and the parts were satisfactorily placed for union in the mesial line.

From the experience already obtained, as also from careful consideration of the subject, I feel justified in calling attention to this addition to what is already more or less familiarly known to those who have studied this complicated subject. At first thought, several strong seeming objections arise. It might be doubted if the osseous palate could be cut and moved in the way described. If an experiment were made on a roof of bone in the natural condition, it would be impossible; for, if the chisel were pushed through the bone a little on each side of the mesial line, it would be impossible to move the intervening portion towards the middle line, because the space is already filled up. This objection does not hold, however, in the malformation; for the space is not filled up, and the vacancy permits the osseous margins to be approximated. Then, division of bone on the two sides, and breaking the front part of each, seems so rude, rough, and destructive, that the idea arises that caries or necrosis might ensue. But in reality the process is, in my opinion, less hazardous than when the

flaps of soft parts are dissected or forcibly pushed or drawn off the bone. Besides the fact that these parts do not always unite, one flap or both will occasionally slough, and so things are rendered worse than ever.

In favor of the proceeding about which I now write, I can state from experience that the loss of blood is much less; and on that account there is less trouble in mopping out the pharynx, and consequently less hazard in the use of chloroform; that the tissues on the lower surface of the bones are not so much disturbed or divided as by the older process; that the periosteum and their tissues below are less disturbed than otherwise; and that, from all these circumstances, there seems less risk of sloughing of the semi-detached parts.

As to the healing of the lateral wounds, I am of opinion that the gap will invariably be closed, and that in the bond of union there will be a firm cicatrix of soft tissue, and possibly bone; that the vault of the mouth will be as firm as in a normal condition, and probably firmer than where a fortunate result has followed the process of Warren, Field, or Langenbeck.

These observations apply solely to instances where the surgeon, in a first operation, has not attempted to close the gap, or has failed in a design to secure union throughout. They will apply, however, with equal, even greater, effect to instances where heretofore, in my own experience, I have left the front part of the cleft untouched. I remember scores of instances of the kind, wherein I now feel confident the whole gap could have been closed by the process above described, with as I imagine, as much success as attended the operation on the soft palate. In case of defective hard palate, after the usual preliminaries, and having bared the edges of the gap in the front, in hard as well as in soft, I would now make the additional wounds with scalpel and chisel, as above recommended, thereby hoping to avoid a second operation by doing all at once, under the beneficial influence of chloroform.

Since the above was written, I have had an opportunity of passing these latter views into execution. A youth of eleven years of age, on whom I had operated soon after birth for wide hare-lip, was brought under my notice, with a fissure extending from the lip to the uvula. A year ago, I had advised delay of a proposed operation on the gap in the soft palate, which was very wide. Now, I thought I should venture to test the proposal in an unusually severe case. Under chloroform, the usual incisions for dividing the levator palati on each side were first made; then the edges of the gap were pared as far forwards as to within half an inch of the front; next the scalpel and chisel were used in the way described; and, finally, six stitches were introduced—two through the hard part, without piercing the tissue; and four through the soft parts, in the usual way.

Unfortunately, the first two stitches slid together, so that practically they acted only as a single one. The effect was, however, highly satisfactory. There was no tension in the front of the gap in the soft palate. The approximation of the bones took off all drag, such as is common under ordinary circumstances; and the result has been equal to my anticipations. The whole of the gap in the soft palate was united, and even a considerable part in the hard. With another operation in front—a repetition of this new process—I am convinced that the gap may be closed up to the alveolar ridge. I have no doubt whatever that, in instances where there is only a slight fissure in the hard palate, the surgeon, by use of the chisel, will thus be enabled to close it, and that in the soft with a certainty hitherto very questionable.

In my anatomical knowledge of such malformations, there is one condition which I fancy might prevent these views being carried into effect. In the generality of severe cleft in the hard roof, the lower and back part of the vomer is incomplete; but in some cases the vomer is entire, although perhaps swayed to one side; and it remains

attached by its lower margin to one side of the hard palate throughout. Here would be a difficulty which might puzzle; for, although the chisel might permit the approximation of the edges, it would be difficult to introduce stitches; but even here there would be a redeeming quality in the new process, for pushing the parts to the mid line might lay them so together that, though union should not occur, they would lie so close that a fissure might elude ordinary observation. In one of the cases above recorded, I have found that entire union in the mid-line has really not taken place. The margins are, however, in such close approximation that the want of union can be ascertained only by slipping the point of a probe through the suspicious-looking part.

With these remarks, I leave the subject for the present, under the conviction that I have touched new ground in a most complicated field of anatomy and surgery, and in sincere hope that I have added to, if not completed, the power of surgery in such cases of malformation.—*British Medical Journal*.

On the Local Treatment of Carbuncle. By PETER EADE
M.D., LOND. F.R.C.P., Physician to the Norfolk and
Norwich Hospital, etc.

In a recent number of the *Lancet* the attention of the profession has again been called to the subject of carbuncular disease, with especial reference to its peculiarities when manifesting itself on the face. As I have had quite recently under my notice and care an example of this serious form of the affection, in which I happily succeeded in cutting short its progress, and to all appearances aborted it in its early stage, I wish to record the treatment adopted and (from the experience I have had in several instances of carbuncle located elsewhere) to express my conviction that this method offers greater advantages than perhaps any other in the management of these important disorders.

In a short communication published in the *Lancet* for Dec., 11th, 1869, I recorded the particulars of a case of extensive carbuncle of the back of the neck which I had treated by the free application of carbolic acid to the diseased part, and especially by its free insertion into the holes and sinuses which had formed, as is usually the case, over the central portion, very early in the course of the disease. An experience since that time of two or three cases of large carbuncle and of many cases of carbuncular boils, treated by the same method, has proved to me that the action of this remedy is so definite and so constantly beneficial that I have no hesitation in recommending it to the favorable notice of the profession.

My recent case was this:—A gentleman of seventy years of age, but still strong and hale, had suffered for some weeks from asthmatic Bronchitis, from which he had in a great measure recovered, when he was suddenly attacked (now some five weeks ago) with pain and hard nodular swelling of the lower lip near to its right extremity. Almost immediately a double festering pimple formed over the centre of this swelling, and the painful induration rapidly extended past the corner of the mouth to the adjacent cheek, and, to a less degree, along the substance of the lip, causing also considerable œdematous swelling of the whole of this part. On the second day severe constitutional symptoms manifested themselves, and feelings of extreme illness were complained of. During this day and the next the tumefaction and hardness continued to increase, the festers over the centre of the original spot opened, and were moist with dirty pus, the whole of the lower lip and right corner of the mouth and the adjacent cheek became tense and swollen, and it was quite evident that a carbuncle was forming on the right side of the face. Into the centre of the two holes which had formed I now pressed with a probe some threads of lint soaked in a strong solution of carbolic acid in oil, (one part to four), and I also laid a piece of lint wet with the same over the apertures, so

as to supplement the small quantity which the shallow sinuses would contain. A little smarting was complained of, but the application was repeated after a few hours, and again the following day. Almost at the end of twenty-four hours it could be perceived that a check had taken place in the morbid process, but by the next day it was plainly evident that the inflammation and induration were really beginning to subside. The carbolized lint was still carefully and scrupulously thrust to the very bottom of the small holes, and from this time no further spread of the disease took place, but, on the contrary, there was a rapid subsidence of the œdema, and in two or three days more little remained but some diffused swelling of the lower lip, some tender induration at and around the seat of the original pimple, and the ragged discharging opening which had formed at the site of the primary festers. The disease was therefore stayed, and in a few days more the patient was convalescent. He is now quite recovered.

I should scarcely have ventured to instance this case as proving the aborting power of carbolic acid over carbuncular or furuncular inflammation—seeing that the disease never attained to very formidable dimensions, and that possibly it might not under any circumstances have increased to a very serious size or extent,—had I not witnessed precisely the same effects in other cases as was here produced by the application of the acid. My conviction, nevertheless, is that the carbuncle was not only rapidly extending, but that it would quickly have become both large and important. And I cannot help contrasting its course with that of one which I had the opportunity of seeing, in its latter stages, some three years ago, where the disease attacked the same parts of the face, where only the usual treatment by poultices, &c., was adopted, and where, (instead of a duration of about one week for the severe symptoms, and of about ten days more for recrudescence) the suffering patient passed through a morbid process which took many weeks to complete its course, and which

not only caused great and prolonged suffering, with great temporary disfigurement, but even at one time appeared to threaten life itself.

As I have stated, I have now used carbolic acid in this way in several cases of carbuncle; and in all of them its application has been followed by a uniform and immediate check to its increase, and a speedy amelioration of the local conditions. When it has been applied early, it has plainly gone far to abort the disease; and when it has been commenced later, wherever it could be brought into contact with the inflamed and hardened tissue, there at least no further spreading has taken place, while swelling and tension have diminished, and dirty suppurating slough has quickly given place to florid healthy granulation. And, from observation of its action, I entertain no doubt, that if it could be brought sufficiently early into contact with the spreading disease, it would be quite competent to prevent its extension beyond the degree to which it had already advanced. Unfortunately, the acid appears to have little or no influence when applied over the unbroken skin; but directly it can be brought into contact with the diseased mass, either by being inserted into the sieve-like holes, or by being applied to it after being laid open by incision, its beneficial action becomes at once manifest.

Much credit is, I think, due to the late Mr. Startin for having suggested that both boils and carbuncles might be due to the growth and spread in and beneath the skin of a parasitic development; and the efficacy of the treatment he was in the habit of adopting, the remarkable effect of carbolic acid in checking its increase, and the almost certainty with which boils in their early stages may be aborted by applying freely to the core of the festering pimple the acid nitrate of mercury, go far to prove the truth of this opinion.

It is extremely unfortunate that the carbolic acid cannot always be brought into sufficient contact with carbuncles in their early stage—partly because of the insufficiency of the sieve-like openings, and partly because the parasite-studded

(?) growth may have already extended beyond the central portion over which these are situated. But even with a very imperfect application I have observed a distinct retardation of the circumferential spread when the acid has been carefully introduced into the holes, conveying to my mind the impression that some destructive influence had been exerted upon the central root or stem of the diseased mass; and in all cases which I have hitherto observed, no extension of the disease has taken place from any part to which the acid has been fairly applied. Hitherto I have only applied it through the natural openings, or after the mass has been exposed by incision or caustic; but I think it extremely probable that a beneficial effect would be produced by the subcutaneous injection of a watery solution of the acid around its edges (after the manner in which it has lately been employed in the case of spreading erysipelas, and some other diseases), or possibly the spread of a large carbuncle might be stayed by drawing through it some small loop-holed drainage-tubes, and allowing the carbolized fluid freely to percolate through these.

The strength of the solution of carbolic acid which I have employed has been about one part of the acid to four or five of the solvent (oil of glycerine), and its efficacy, I would repeat, has appeared to be limited almost absolutely to those parts with which it could be brought into actual contact; and although it appears occasionally to have produced injurious effects when used in large quantity, yet I have kept a large sloughing and granulating surface for days together constantly covered with the carbolised oil, without any harm arising, although the urine soon presented the peculiar blackish colour which has been several times observed during its employment.

I will only further add that in looking over the various methods of treatment which have from time to time found favour with the profession, there seems to have been a constant under-current of feeling in favour of such remedies as have a more or less caustic or antiseptic (? parasiticide)

influence. Terebinthines, resinous applications, caustic potash, and several other caustics have been held by various competent authorities in high esteem, and their partial usefulness would seem to fortify the theory of the vital, the living nature of the disease—a theory which I think is greatly supported by the decided influence upon it of carbolic acid, a substance so well known to possess a special power of preventing the increase and development of low forms of life and cell-growth.—*Lancet*.

Cremation :—

The subject of cremation is again taken up by Sir Henry Thompson in the pages of the *Contemporary Review*. In this article he replies to various criticisms that have appeared in different journals, and gives a detailed account of the process he would suggest as most appropriate for the object in view. Sir Henry states, and it is certainly a somewhat remarkable fact, that the only formal opposition to cremation has been made by the present medical Inspector of Burials for England and Wales, Mr. Holland; and in reply to the observations of this gentleman, Sir Henry refers to the evidence obtained by Drs. Southwood Smith, Waller Lewis, and others, in regard to the large amount of gases produced in the decomposition of the body, and the impregnation of soil, water, and air to a considerable distance. Such impregnation by the dead, and consequent danger to the living, cannot, we presume, be questioned for a moment, and is fully borne out by the statements of Mr. Bowie and the general experience of the profession. We must also fully endorse Sir Henry's remarks in regard to the elimination of ammonia, or at least of carbonate of ammonia, from decomposing animal tissues, and are at a loss to understand how any doubt can exist about the point. Turning to the second part of Sir Henry Thompson's essay, he remarks that he has personally superintended the burning of three bodies of animals, one weighing 47 lb., another 140

lb., and a third no less the 227 lb., with the most satisfactory results, the residue in the first instance weighing only 1½ lb., and in the second 4 lb. In the last case the body was placed in one of Dr. Siemen's furnaces, the interior of which was heated to about 2000° F. The inner surface of the cylinder, which was about 7 ft. long by 5 or 6 ft. in diameter, was smooth, almost polished, and no solid matter but that of the body was introduced into it. The gases, which were at first abundantly given off, passed through a highly-heated chamber, among thousands of interstices made by intersecting firebricks laid throughout the entire chamber, lattice fashion, in order to minutely divide and delay the current, and to expose it to an immense area of heated surface. By this means they were rapidly oxidised, and not a particle of smoke issued by the chimney. No second furnace was therefore in this instance requisite, though, under certain circumstances, the products of combustion might be transmitted through another, and the fumes from this into a third and so on, each being made available for the combustion of one body. The process was completed in fifty-five minutes, and the ashes, which weighed about 5 lb., were removed with ease. Sir Henry meets the objection that has been raised to the practice of cremation, that it will lead to an increase of crimes of poisoning, by suggesting that a public verifcator of the cause might be appointed, whose duty it should be to ascertain and certify the cause of death, whilst the stomach might be kept for some years. In reference to the expense, he still thinks it would be far within the present cost of a funeral. As regards ourselves, we have already expressed our opinion that it is an eminently satisfactory mode of disposing of the dead—safe, speedy, wholesome, and economical; but we rather doubt whether ancient custom and popular prejudice can be so easily overcome and altered as Sir Henry Thompson appears to believe.—*Lancet*.

Obstetric Memoranda.—Treatment of Post Partum Hæmorrhage. By ALFRED GODRICH, M.A., M.R.C.S., &c.

The means of suppressing *post partum* hæmorrhage have been most ably discussed in the pages of the *Journal*; but I think scarcely enough attention has been paid to the means for its prevention.

Although I never had a fatal case, yet, in my early practice, it was my lot to meet with two very alarming ones. Subsequently, I noticed that, although there might be no large loss of blood, the sudden evacuation of the contents of the uterus, especially when there was a large quantity of liquor amnii, was often followed by death-like faintness. Even in tapping for ascites, it is always laid down as a rule to apply a bandage, which is gradually tightened as the fluid escapes, to assist the abdominal muscles, and to compensate in some measure for the loss of pressure sustained by the large vessels and viscera of the abdomen. If, then, such precautions are necessary in a case where the evacuation of the fluid is entirely under control, why should not similar precautions be taken in the emptying of the uterus? Most practitioners, no doubt, apply a binder, but not till the uterus has emptied itself, and the large blood-vessels of the abdomen have become turgid with blood from want of that support to which they have for months been accustomed. I was led by such considerations to adopt the plan of using the binder, not only after, but during labour; and, as since then, I have not had a single case of *post partum* hæmorrhage, or even of that sudden exhaustion which I had before so often witnessed, I am induced to describe the plan which I adopt uniformly in all labours, and which I have found successful.

I select some stout material, wide enough when doubled to reach from the fundus of the uterus to two or three inches below the crista ili. This, as soon as the woman is confined to her bed, is pinned as tightly round her as can be borne, thus giving support to the abdominal muscles, and keeping the child in the axis of the pelvis. As soon as true expulsive pains commence, the binder is unpinned, and the upper fold given into the hands of the nurse, with the directions that, during each pain, she should draw it as smoothly and tightly as possible across the patient's abdomen. There is no fear of the lower fold slipping, as it is kept in position by the weight of the woman's body, and

therefore should be left quite alone. As soon as the head begins to emerge beneath the pubes, the pressure should be continuous and as strong as possible, and never relaxed for a single instant till after the child is born and the placenta expelled, when the binder should be pinned as tightly as possible by the surgeon himself, and not left, as is too often done, to the nurse.

I venture to think that, if some such uniform plan were adopted in all cases of labour, we should hear much less of *post partum* hæmorrhage, and be often spared the using the many hazardous, if not dangerous, expedients suggested for its suppression.—*British Medical Journal*.

Clinical Memoranda.—Movable Kidney.

Mrs. H., aged 27, of good figure, and the mother of two healthy children, the youngest six months old, consulted me on March 18th. She strained herself in trying to open a window about a month ago. Since then she has had pain, more or less, in the abdomen, below the right costal margin. She thought she felt a swelling. When young, she was subject "violent attacks of pain in the bowels." I found a hard tumour reaching from the umbilicus, upwards and outwards, nearly to the ends of the last two right ribs. The fingers could easily be passed between the costal margin and the tumour. The mass, slightly painful when handled, felt exactly like the kidney, the convex border of which was the lower edge of the swelling. The tumour, which was covered by intestine, moved downwards about an inch and a half on inspiration, and upwards on expiration. It was also freely movable in all directions by the hand. Beyond the fact that the urine had been scanty, and loaded with urates, since the strain, there was no other symptom. My diagnosis was movable kidney, and my advice was, that the patient should wear an abdominal support, with a pad to keep the kidney in its place as much as possible. I may add, the bowels were thoroughly evacuated before my decision.

THOMAS COLE, M.D., Lond., M.R.C.P., Bath.

—*British Medical Journal*.

CANADA

Medical and Surgical Journal.

MONTREAL, MAY, 1874.

A CENTRAL BUREAU.

We notice with great pleasure the introduction into the Dominion House of Commons, of a motion by Dr. Brouse to provide for preliminary steps being taken for the establishment of a central controlling body for the whole Dominion with regard to Sanitary matters. The idea is, to begin by forming a bureau of Sanitary statistics in immediate connection with some one of the Governmental Departments, and under the control of such departmental chief. The gentleman who brought the matter before the House, urged in very strong terms the desirability of the immediate institution of such a body as a permanent part of our political machinery, adducing amongst other arguments the undoubtedly favorable impression which would be created abroad by the publication of Canadian vital statistics, and the good which must necessarily ensue from our being able to compare correct mortality returns from different parts of the country, with the view to investigate and correct the causes giving rise to any excessive or unusual degree at any particular place. It was also urged that such a Bureau would be of great service in suggesting to the educational department the adoption of regular instruction in the important elements of Sanitary science in all our public schools. Of course it is understood that for the purpose of obtaining such statistics the general

Board or Bureau would require to be assisted by Local Boards in every part of the country, the manner of appointment of which would be fixed by subsequent legislation ; and it is here that we arrive at the practical part of the whole thing. It is high time that we, as a country, should show ourselves sufficiently civilized to legislate in a rational manner for the preservation of the health of the community at large. We think that no one will dispute with us the fact that the feeble attempt hitherto made, and now making by the present civic organization for the regulation of hygienic measures in this city have resulted in miserable failure. The most entire dissatisfaction, with a want of confidence in the present so-called health office is universally felt, and we do not believe that matters are a bit better in other cities of this Dominion ; and every one who knows anything about the matter will say the sooner it is done away with the better. What every medical man, and every intelligent citizen has a right to know is what is being done by those charged with the all-important matter of looking after the health of the population of whom he is one, and whether such work is being done well. Such information can never be had, nor the results of hygienic management made known until they are officially laid before an authorized public Bureau. It would be a work of supererogation to argue further concerning the importance of immediately establishing a Sanitary Board, because it was universally admitted by those who spoke upon Dr. Brouse's motion for a committee. The only question raised was the ability of the House of Commons to deal at once with the matter, it being suggested that possibly this would be trenching upon the functions of the Local Legislatures. As the matter stands at present, however, the Premier has promised that the matter shall not be lost sight of, but the jurisdiction of the House shall be investigated during the Parliamentary recess, and if possible (of which we have but little doubt) a bill for the establishment of a Central Bureau will be brought in.

We should all thank Dr. Brouse for having brought the subject forward and placed it in a fair way to receive the attention it deserves. It is a measure which was long ago advocated by this Journal, but which until the present has been sadly neglected by our Legislative men. The Medical profession is well and ably represented in the Commons, and we trust that they will at the next session of Parliament push this matter to a successful issue, and that before many years we shall be able to point to the successful workings of our Sanitary System as a proof of the advanced civilization of our country.

ANIMAL VACCINE.

When Jenner published the results of his observations on vaccination at the commencement of this century, he expressed a belief that it was an absolute and complete protection against small-pox, or at least as much so as small-pox itself. That a person who had been efficiently vaccinated was not more liable to contract small-pox than an individual who had gone through the disease naturally or by inoculation.

These views have long since been proved correct and have been corroborated not only by statistics, but by the experience of the most eminent writers on this subject. In the report of Mr. Simon to the British House of Commons in 1851, that gentleman states that "if vaccination were universally performed in the best known manner, deaths by small-pox would be amongst the rarest entries in the register. This is as much as can be said in favour of vaccination as it cannot be regarded as a greater preventive than the disease itself; secondary small-pox is well known to occur and has been observed in some rare cases, to be confluent, and occasionally proves fatal. In Marseilles during the epidemic of 1828, 2000 cases of small-pox occurred. Twenty

persons had the disease for a second time, and of these four died. In the year 1860 we had two cases of secondary small-pox under our professional charge, and one of them died during the secondary stage of fever. It is stated in Reynolds system of medicine on the authority of Dr. Seaton, that "the present average death rate from small-pox is scarcely, in any European country, one tenth part what it was prior to the introduction of vaccination, and in those countries in which vaccination has been most carefully carried out it is much less than one tenth part of what it was at the end of the last century." This ought to be evidence sufficient for any reasonable person. Some years ago the subject of the communicability of syphilis and other contagious diseases by vaccination through the use of humanized matter engaged the attention of the profession and the public, which gave rise to a systematic denunciation on the part of some fanatics against vaccination. It was condemned as worse than useless, as it did not afford an absolute protection and that the hazard of spreading a disease like syphilis was a greater evil than small-pox. The protective influence of vaccination efficiently performed has been fully proved, but again the possibility of communicating syphilis by the use of impure humanized vaccine matter rests on high authority and cannot be gainsayed. These facts led to a series of experiments conducted by M. Depaul under the auspices of the Academy of Medicine, Paris, who, in his published report arrived at the following conclusions; that the transmission of cow-pox from heifer to heifer could be obtained without difficulty; that the progress of the eruption after inoculation was more rapid in the heifer than in man. The pimple appeared on the third day and commenced to suppurate on the seventh. This was the result observed in healthy animals, very little constitutional disturbance occurred; occasionally diarrhoea, with slight fever was noticed during the first few days, but never to any considerable extent, and in the majority of cases nothing

was observed. If the heifer was out of health, the vaccination failed altogether, or was slow in being developed. Depaul employed matter from Beaugency, and also from Naples, and from a series of experiments he arrived at the conclusion that the bovine species were incapable of being inoculated with syphilis. It was noticed that matter taken from a healthy heifer at the proper period, succeeded quite as well as the humanized vaccine matter. That the employment of animal vaccine matter appeared to be more marked in its effects, the re-action was greater at the period of suppuration. That the pustule is more voluminous, sometimes irregular as to form, and unequally developed, and sometimes the inoculation of a single point would give two, three or four pustules in the immediate vicinity. This latter circumstance, adds M. Depaul, is occasionally seen in the inoculation with humanized vaccine matter, but it is a rare occurrence. Another circumstance noticed in this report which is worthy of record, is that occasionally the eruption after the vaccination will be delayed from the ninth to the twelfth day, and if a second inoculation has been in the mean time practised, all the pustules will become developed and run their course.

We have been induced to draw attention to this important subject, and to epitomise M. Depaul's report, because the subject is not generally understood, and also because the quality of vaccine matter in general use amongst us in Canada, is far from being good or satisfactory in its results. There can be no reason why in our country districts, where healthy heifers are always attainable, the local practitioner should not adopt the practice of having at hand fresh and reliable vaccine matter, which if carefully protected from the atmosphere has been found effectual several months after being collected. But failing to procure the matter from this source, which requires only a little attention, we would direct our readers to the advertisement which appears elsewhere of Dr. Henry A. Martin & Son, of Boston Highlands, Mass.

These gentlemen fully alive to the importance of this subject commenced their vaccine establishment in the year 1870, and since that time have supplied large quantities of animal vaccine virus. From a private letter we learn that during the year ending 31st March, 1874, upwards of 450,000 points of vaccine virus have been distributed throughout the United States and Canada—This ought to be sufficient evidence of its reliability. Besides ivory points well armed, the Messrs. Martin offer to supply crusts, and tubes filled with fresh lymph.—

UNIVERSITY OF BISHOPS COLLEGE.

LENNOXVILLE.

The annual convocation of Bishops College for conferring degrees in Medicine and Surgery was held at the College Buildings Lennoxville, on Thursday 9th April ult. There were present the Lord Bishop of Quebec, Mr. Chancellor Hale and members of the Faculties in Arts, Divinity and Medicine.

The Dean of the Faculty of Medicine, Aaron H. David M.D., D.C.L., made the following announcements.

In the Botany and Zoology examinations six students passed viz., Messrs. Lane, Davis, Rose, Lemieux, Gravely and Shee, the names being placed in order of merit.

The following gentlemen passed their primary examination, their names being given in order of merit. Messrs. D. A. Hart, J. Lemieux, E. Rose, P. A. Shee, J. A. Pigeon, Victor J. A. Venner, Wm. H. Hunter, D. A. Hart, J. Lemieux, P. A. Shee, G. Rose, Chas. Lafontaine, J. Eneas, E. A. Duclos, J. McKay, and Valmore St. Germain.

The names of the following gentlemen were presented as worthy of honorable mention, Messrs. Victor J. A. Venner, Wm. H. Hunter, D. A. Hart. and Israel Lemieux.

Dr. Hart delivered the valedictory address on the part of the graduating class and Dr. Leprohon addressed the graduates on behalf of the Faculty.

MONTREAL GENERAL HOSPITAL.

Dr. T. G. Roddick has resigned the House Surgeony of this Institution to enter upon private practice in the city. This responsible office has been held by this gentleman for the past two years, and we know that during the whole period he has enjoyed the most entire confidence both of Governors and Medical Board. We are quite sure that the ability and skill evinced by Dr. Roddick whilst medical head of our most important charity bear testimony to the possession of such talents as are certain to enable him to be successful in his future career. We, along with all his friends, express our warmest wishes, that every prosperity may attend him.

The vacancy thus made has been filled by the nomination of Dr. C. J. H. Chipman, formerly Assistant House Surgeon, to the more advanced post, and by the promotion of Dr. James Cameron, formerly House Apothecary, to the office of Assistant House Surgeon. Both these appointments will give much satisfaction, and we beg to congratulate these gentlemen upon having obtained such deserved recognition of the faithful performance of their duties.

The Apothecaryship has not yet been filled, but we expect to be able to make the announcement of the successful candidate in our next number.