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CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Notes of Cases in Practical Medicine. By A. H. DAVID, M.D., L.R.C.S., Edin.

ECZEMA—Is a very common disease of children in this country, and is generally looked upon as a sign of health, and therefore a disease that should not be interfered with; but with the improved knowledge we are daily acquiring, the sooner this idea is exploded the better; and of late years I have been in the habit of advising parents of children afflicted with this complaint that have occurred in my practice, to allow me to try and arrest a disease, which is so very disfiguring; and by the simple treatment I have adopted, have succeeded in curing every case. I may premise that various names have been given to this disease: *Eczema, Datre, Tinea,* and in this country, among the French Canadians, with whom it is a very common complaint, it is called *La Rifle* or *Reefe;* and it is especially among these people the absurd idea prevails that it is wrong to attempt to stay its progress. It appears, or shows itself, in children at the breast of three, five, or eight months of age, and again in children of two or three years of age, and also at the period of cutting the last double teeth.

I shall not in this paper attempt to enter into a description of the varieties of this disease, as laid down by authors; but simply describe the form as it has generally presented itself in the cases I have met with. The first thing which attracts the attention of the mother is the child's constantly putting its hands to its head, as if it were suffering from *pruritis* or *itching;* soon after which an eruption of small vesicles appear. These vesicles contain a small globule of limpid serum, and usually correspond with the minute projections whence the hair issues: when these small vesicles are burst, from the child's scratching, a drop of serum escapes, and presents a yellowish scab, which, being soon thrown off, leaves a little pink spot, alternately dry and moist, with a white circle round it.

When the spot is moist, a very minute pore is perceived, from which a small quantity of serous fluid distils, which, on drying, leaves a scab the size of a pin's head. Sometimes, also, layers of the cuticle, altered in their structure, and thickened from the dried fluid of the vesicles, are detached from the skin, and form the scabs, which increase in thickness and size as the eruption continues. It is at this stage that a fresh eruption of vesicles takes place, and from the head spreads over the temples, ears, and face. The swollen scalp, indeed, pours out a profusion of viscid fluid, which glues the hair into masses, and form, in drying, a yellowish-brown incrustation. It is in this stage of the disease, according to *Rayer*, that the child is tormented with irresistible itching, which cannot be expressed by words, and which gains so in intensity, that it rests its little head upon its shoulders, and if its hands are at liberty, scratches itself with the greatest imaginable eagerness, although the blood follows the nail.

When children who suffer from this disease are properly attended to, and judiciously treated, the disease will disappear within three or four weeks; but if left to itself, under the erroneous impression that it is wrong to interfere with the eruption, it becomes chronic, and the bulbs of the hair inflame and lose their functions. I cannot but admit, however, that it is a recognised fact that children who labour under this disease rarely or ever suffer from convulsions or diarrhœa while teething; but should the discharge cease suddenly, either naturally or in consequence of ill-timed medication, the child becomes restless, dejected, and evidently unwell, and diarrhœa or convulsions do follow; and it is from this, I presume, the disease has become to be looked upon as a salutary one, and not to be interfered with—for although the itching distresses the child very much, the mother is the principal sufferer, as her vanity is wounded by the hideous crusts which cover the face of her child.

The treatment which I have used with the greatest success for many years, is simply keeping the parts constantly bathed with a solution of the sulphuret of potass (℥ ss. to ℥ ij. to ℥ viij, water), and giving internally a few drops according to the age of the child of liqr. potassæ, three times a day and I have not failed in a single case where the lotion has been properly applied, and the medicine regularly given. Of course the bowels must be properly regulated at the same time, and care taken that the child is not overfed. I have not seen any, or a single, bad consequence follow this mode of treating the disease, and invariably found my little patients, after cure, quite remarkable for the freshness of their colour and the excellence of their health.

42 Beaver Hall Terrace.

Fracture of the Lens: Does it occur in Death from Violent Hanging?

By GEORE E. FENWICK, M.D., Demonstrator of Anatomy, McGill University, &c.

In the September number of the New York *Medical Journal*, there will be found a paper by Dr. Ezra Dyer, of Philadelphia, entitled "Fracture of the Lens of one Eye, and of the Anterior Capsules of both Eyes, from Death by violent Hanging." It appears that in the case of Anton Probst, who was executed on the 8th June last, the Doctor made ophthalmoscopic examination of the eyes about thirty-five minutes after the drop fell. This examination was conducted in the most careful and scientific manner; first with the aid of an oil lamp, and subsequently with a powerful electric light from a battery of thirty-six cells. The result of this examination was that in the right eye there existed a line running transversely across the lens a little below its centre; from it, at various angles, ran short and long fine lines, very near together, but not regular; these lines, when illuminated, presented "the appearance of a crack in a cake of clear ice." It was taken to be fracture, involving the capsule, and extending in a horizontal plane backwards into the substance of the lens itself. The left eye presented much the same appearance, only less in extent; the line of fracture had very short lines, running upwards and downwards, very close together, requiring a powerful glass, and, when seen, presented a feathery appearance.

The eyes were carefully removed, and four hours afterwards examined anatomically, when the condition above described was found to exist.

This singular appearance led Dr. Dyer to perform experiments on three dogs, two of which, after being put to death by hanging, exhibited the same peculiar appearance, viz: fracture of the substance of the lens. The other dog died in prolonged convulsions, and in him no lesion of either lens was observed.

It was noticed that the greatest lesion existed on the side opposite to that on which the knot in the rope was placed.

This is perhaps the first time that such a lesion has been observed; and I am at a loss to conjecture how fracture of the lens, as described, can possibly occur.

Dislocation of the lens has been met with, and is described by authors generally as the result of direct violence. Cases are mentioned as occurring from falls; and, in some instances, there has been noticed rupture of the sclerotic coat of the eye, with dislocation of the lens, which passes out through the fissure, and is found beneath the conjunctiva. The lens has also been found dislocated into the anterior chamber. But fracture

of the substance of the lens is an occurrence so incomprehensible, that it has never been conjectured to occur, and is consequently not mentioned by authors. I can well understand, in the shock of the fall, that tearing of the capsule of the lens might occur; it would, indeed, be very likely to happen, as the capsule of the lens is described as transparent, highly elastic, and brittle. The peculiarity of this membrane is that, when ruptured, the edges roll up, with the outer surface innermost, so that if, as is described, there had been rupture of the anterior capsule, consequent on the shock of the fall, I cannot see how the lens did not slip out. I should think any force sufficient to tear the capsule of the lens would be quite sufficient to rupture the suspensory ligament of the lens itself. How the substance of the lens became cracked and split up like a cheval glass is still more difficult of comprehension, unless Probst and the two dogs had lenses of peculiar construction for the occasion; because anatomists describe the lens as consisting of concentric layers, of which the external, in the fresh state, are soft, resembling somewhat gelatine or paste. Furthermore, the concentric layers are capable of demonstration only by boiling the lens in water, or steeping it in alcohol.

These reflections were made at the time I read Dr. Dyer's paper. I have since had an opportunity of examining the eyes of the criminal Mack, who suffered death on the 23rd instant. In this case the length of the drop was six feet; and, on *post mortem* examination, it was found that the second cervical vertebræ was torn away from its attachment to the third, the medulla was torn across, and the os hyoides with tongue severed from its attachment to the thyroid cartilage: there was general congestion of all the viscera.

Through the kindness of the gaol physician, Dr. Beaubien, I procured both eyes, and examined them carefully with the ophthalmoscope, and subsequently anatomically. Nothing abnormal existed; the corneæ were not as transparent as during life, a peculiarity which is noticed as a cadaveric effect. The lens was perfectly normal, and its capsule intact. The left eye was more congested than the right (the knot was on the right side), and there was, on its outer side, rupture of a blood-vessel, with effusion of a small clot, situated between the sclerotic and choroid coats, and close to the attachment of the margin of the iris.

No. 4 Beaver Hall Terrace, Nov. 26th, 1866.

REVIEWS AND NOTICES OF BOOKS.

Manual of Materia Medica and Therapeutics, being an abridgment of the late Dr. Pereira's Elements of Materia Medica and Therapeutics, arranged in conformity with the British Pharmacopœia, and adapted to the use of Medical Practitioners, Chemists and Druggists, Medical and Pharmaceutical Students, &c. By FREDERICK JOHN FARRE, M.D., Cantab., F.L.S, &c., assisted by ROBERT BENTLEY, M.R.C.S., F.L.S., &c., and by ROBERT WARMINGTON, F.R.S., F.C.S., &c. Edited, with numerous references to the U. S. Pharmacopœia, and many other additions, by HORATIO C. WOOD, Jr., M.D., Prof. of Botany, University of Pennsylvania, &c., with two hundred and thirty-six wood engravings. 8vo. pp. 1030. Philadelphia: Henry C. Lee; Montreal: Dawson Bros. 1866.

The Elements of Materia Medica by the late Dr. Pereira has been the standard of authority on this subject ever since its first appearance. In the later editions of the work each subject under consideration is treated most copiously. The constant labour of the late author, his continued additions to his store of knowledge, by pushing inquiry and verifying the information received, has given to his Elements the peculiar value which it possesses as a work for reference. With a view of giving to the profession a work with the stamp of Pereira, but of more convenient size, possessing all that is essential to know, and adhering to the original plan of arrangement, Dr. Farr, assisted by Professor Bentley and Mr. Warmington, have prepared the present abridgment, arranged in conformity with the British Pharmacopœia. This edition has been specially adapted for medical practitioners, chemists, druggists, medical and pharmaceutical students, inasmuch as the copiousness of Pereira's great work becomes embarrassing to those who have but limited time at their disposal. The editors have omitted all remedial agents, except those termed by the author "pharmaceutical;" all mental, physical, imponderable, and hygienic remedies, such as the influence of mind, light, heat, electricity, food exercise, and climate. Secondly are omitted all remedies which are not official, or which are not contained in the British Pharmacopœia; and, thirdly, all classifications of medicines have been omitted, except those founded on the chemical relations of inorganic bodies and on the botanical and zoological classification of plants and animals yielding organic bodies. Other changes are to be found in the work of a more directly practical bearing, such as where opinions expressed by the

anthor do not accord with the more advanced knowledge of the day, and which would have been modified or altered by the author had he lived. These are changes which will be readily admitted as of necessity to suit our time, but which may in their turn yield to further experience. The American editor has added several notices of substances which are to be found in the United States Pharmacopœia, and which are not in the English editions nor adopted by the British college. In the American edition is to be found two tables of weights and measures—the one of the British Pharmacopœia, the other adopted by the United States: these are of great practical value. Altogether the work is a most valuable addition to the literature of this subject, and will be of great use to the practitioner of medicine and medical student. The work, as issued by the American publisher, is a handsome volume of 1030 pages, most amply illustrated, the wood-cuts being of superior finish, and clearly impressed. These illustrations are taken from the original work, so that it looks like an old friend in a new dress. The paper is superior, and the type of large size and clear. It is to be had of Dawson & Brothers, Great St. James Steeet.

Practical Therapeutics, condensed chiefly with reference to Articles of the Materia Medica. By EDWARD JOHN WARING, F.R.C.S., F.L.S., Surgeon in Her Majesty's Indian Army. From the Second London Edition. 8vo., pp. 815. Philadelphia: Lindsay & Blakiston. 1866.

This work is a monument of industry and perseverance, from the pen of an officer in Her Majesty's Army, who employed leisure hours in arranging his notes and observations, many of which had been made years before. The present edition was delayed for some time after the publication of the British Pharmacopœia. In consequence of the changes in that work being so numerous and important, the author found it necessary to make alterations to bring the text up to the standard established by authority. In the arrangement the articles are placed alphabetically. Under each heading will be found a short, concise description of the substance under consideration, its botanical arrangement, medical properties and action, officinal preparations, with method of preparing them, and dose; and then we have a full, useful, yet concise description of the therapeutic uses of the drug, together with ample references, giving the names of the authorities who have recommended and used it in any particular disease. A noticeable feature in this work is an index of diseases, whereby the practitioner or student can ascertain

the use of any one drug in any special disease, and also the name of the person on whose authority it has been employed. This is most important, as affording ample opportunity for reference, which is not to be found elsewhere. As a work for reference, it is invaluable, both to the practitioner and student. The book forms a handsome volume, printed on good paper, and the type is clear and well impressed.

Orthopedics: A Systematic Treatise upon the Prevention and Correction of Deformities. By DAVID PRINCE, M.D., 8vo. pp. 240., Philadelphia: Lindsay and Blakiston, 1866.

The volume of Dr. Prince presents a very creditable appearance in paper, type, and illustration; and in this respect it is very acceptable.

The attempt at arranging the orthopedic material in systematic order has proved a failure with the author, as it did with Andry. There is no organic cohesion between the subjects of this specialty, except in the treatment, which of course is not available as a systematic distinction. Moreover, a system has its inconvenience. In order to perfect the literary structure, we are often forced to draw in heterogeneous subjects which prove unwieldy. The same experience, the author has obviously made, very much to the detriment of his literary achievement.

All he imparts about cleft-palate is well known, and best understood by dentists, to whom it properly belongs. But the most important surgical portion of the subject he passes over with a few words. We leave the priority undecided between J. Mason Warren, of Boston, and B Langenbeck, of Berlin; but the author should not have omitted the numerous and successful operations for cleft-palate performed by the latter and his pupils, during the last five years, nor the ingenious technicalities adopted by Professor Langenbeck, to facilitate the procedure. It is not our business to correct the defects of the author; but we must refer the enquiring reader to the Archives of Clinical Surgery of Berlin, which contain most valuable papers and illustrations on the subject.

Again the author introduces ectrophy of the bladder, and drops it into "a receptacle for the urine" of Bigg, without pointing out the plastic method of Dr. Daniel Ayres * of Brooklyn, who successfully created an organic anterior wall for the defective urinary reservoir.

In web-fingers, the author suggests the sacrifice of the bones of one finger for the purpose of obtaining integuments to cover the adjoining ones,—an advice which we should feel inclined to reject as reprehensible. The web-membranes are mostly large and sufficiently expansive

* New York *Medical Gazette*, 1857.

to supply the needful covering. Dieffenbach has, moreover, demonstrated the plan by which the encroachment of the fork of the fingers may be effectually averted, but the author has failed to notice it.

The subject of strabismus is obviously foreign to the author, and his estimate of the operation falls notably below the mark of reality. No surgical procedure has been raised to an equal degre of accuracy and perfection. The failures of clumsy operators cannot be admitted as standard results. However, we think with the author that proper optic gymnastics should oftener be resorted to, more especially in cases of strabismus that have grown out of bad habits.

The article on perverted, excessive, or diminished nervous action is diligently compiled, and comprises the views of some of the most prominent neuro-pathologists whose language has been accessible to the author. New points of practical interest are not set forth. The subject is left precisely in *statu quo ante*. The theory ascribed to Barwell, and adopted by the author, that the waste of contracted muscles is due to compression of the capillaries, is obviously fallacious; for not only the muscles concerned in the contraction are wanted, but the various parts of the affected region or extremity participate proportionally. In wry-neck, for instance, the affected side of the face is greatly attenuated, whilst the sterno cleido-mastoid alone may be in a state of contraction. If the trouble concerns but a single group of muscles of an extremity, we find the connective tissue and its adipose complement much diminished: even the growth and development of the bones is prejudiced, as a comparison discloses. In all contractions the action of the vaso-motor nerves is undoubtedly compromised whether their origin be central or reflective; a mere mechanical explanation is inadmissible.

The author quotes at some length Brown-Sequard and Matteucci without arriving at conclusions warranted by the logic of their experiments. In cramps excited by central irritation, tenotomy, or approximation of their attachments relaxes the affected muscles; whereas elongation causes pain and moreover renders them proportionately susceptible to galvanic excitation. The author infers (page 35) that "the division and *extreme sudden extension* of the tendons and muscles obviates the pain," and therefore tries to establish "the extension" as a therapeutical axiom in the treatment of deformities arising from such sources We readily admit that extension has its therapeutical value, but it can never aspire to be substituted for tenotomy and myotomy. In moderate spastic contraction of short duration it may suffice, and in such cases every rational and well-informed practitioner resorts to extension in preference to division of the muscles; but in aggravated cases extension i

not only ineffective and painful, but even dangerous by increasing the existing, or by reproducing the original morbid condition that gave rise to the contraction. We remember the case of a middle-aged gentleman who suffered from paraplegia, in the course of which the extensor muscles of both feet became to such a degree contracted that the feet appeared to be in the same axis with the legs. The disease had existed for some eighteen months, when gradual improvement became noticeable in colour, temperature, sensation, and motion. At the end of the third year the operation for the deformity was deemed practicable, from which it was hoped that the patient might be enabled with the aid of crutches to move about. But he refused the administration of chloroform. After the Achilles tendon had been divided, a rather powerful effort was made to flex the foot. The attempt not only failed, but gave rise to *terrific pain*. The division of the tibialis posticus and peroneus longus muscles had to be deferred by request of the patient. During the ensuing night electric discharges commenced from the spinal chord downward, which continued in increasing severity some weeks, when inflammation of the chord supervened terminating fatally in a few days. The use of anæsthetics might probably have averted the eventual reproduction of the original lesion; but nevertheless the case proves all we intend to show, namely first, that even a powerful extension does not overcome spastic contraction of long standing and great intensity; and secondly, that such an attempt is fraught with imminent danger. Similar experience has been made in reflected contractions attending joint diseases. In those cases we have seen articular affections reproduced that had terminated years previously, by merely placing contracted muscles in forcible extension, notwithstanding the use of chloroform. The ensuing inflammations were characterized by extraordinary violence and rapid development. In the face of such facts, it would seem that the suggestions of the author must be taken *cum grano salis*, and be set down as unsafe practice.

(To be Continued.)

A Practical Treatise on Fractures and Dislocations. By FRANK HASTINGS HAMILTON, A.M., M.D., Professor of the Principles of Surgery, Military Surgery and Hygiene, Bellevue Hospital Medical College, Surgeon to Bellevue Hospital, and to the Charity Hospital, New York, &c., &c., &c. Third edition, revised and improved. Illustrated with two hundred and ninety-four woodcuts; Philadelphia: Henry C. Lea, 1866.

This work has been received as a standard authority on the subject of Fractures and Dislocations. Perhaps no treatise gives greater evidence of

earnest and conscientious research, and the profession owe to the author a debt of gratitude for its production. In this, the third edition of the work, the author has added considerable material from published observations recorded since the appearance of the second edition. He has also taken advantage of observations made by himself at the Bellevue and Charity Hospitals, New York. In this labour he acknowledges the able assistance of "that zealous student and thorough scholar, Dr. John Winslow" of New York.

In the chapter on "gun-shot injuries" the author has added many interesting and valuable statistics obtained from the published records of the United States and Confederate armies. The work is amply illustrated by 294 illustrations, two hundred and thirteen of which are devoted to the subject of fracture. The author has selected some of the illustrations from Gray's treatise on anatomy, descriptive and surgical. These chiefly illustrate the centres of ossification and subsequent development of bone. Furthermore he has borrowed from the same author several illustrations of fractures; these are duly accredited in the text. We regard this as one of the most valuable and interesting works which have issued from the American press. It forms a handsome volume of seven hundred and seventy-seven pages, printed on excellent paper and of superior finish. It is to be had of Dawson Bros., Great St. James Street.

PERISCOPIC DEPARTMENT.

Surgery.

CASE OF PARACENTESIS PERICARDII—RECOVERY—CLINICAL REMARKS.

(Under the care of Dr. Clifford Allbutt.)

This rare operation was lately performed at the Leeds Infirmary in a case of acute rheumatic pericarditis, and with perfect success.

Dr. Allbutt, in his remarks upon this case, compared the operation as performed with a canula by Mr. Wheelhouse to that with a bistoury as recommended by Trousseau and others. He expressed a very decided opinion in favour of the canula. He also pointed out that in the present case one tapping was found to be sufficient, and that irritant injections were not required. He added that, had it been found necessary to repeat the operation, he should have advised the injection of an iodised solution.

Dr. Allbutt, in concluding his remarks, pointed out how strong an instance was to be seen in this case of the unity of the Medical Art in all its aspects. He said that no case could show more clearly how necessary it is for a physician to have a useful knowledge of the resources of the surgeon, and for the surgeon to be able at once to perceive the wants of a physician. Nothing, in his opinion, was more to be regretted than the unfortunate division of these two great departments of the healing art, by which a mere arrangement of convenience has been placed on the level of a real distinction, thereby encouraging at the very outset of a student's career a narrowness of thought and an incompleteness of education, which is most mischievous to the best interests of the profession.

For the notes of the following case we are indebted to Mr. George Thompson, clinical clerk :—

C. S., aged 26, gas-pipe layer, was admitted into No. 4 ward, under the care of Dr. Allbutt, on September the 18th, 1866. On admission he was suffering from very acute rheumatism, both muscular and arthritic, and there was considerable dyspnœa and oppression. On examination the pericardium was found to be much distended with fluid, and there was acute pain in the region of the heart. A blister over the heart was ordered, and full alkaline and opiate treatment.

On September 19, about 11. 30 p.m., Dr. Allbutt was hastily summoned to see the patient, who was found sitting up in bed, with his elbows on his knees, struggling for breath. He was covered with a cold copious sweat. The area of pericardial dulness was found to be considerably increased, occupying nearly the whole of the left chest in front. There was perfect resonance all over the left lung behind. The patient was clearly at the point of death, and Dr. Allbutt determined at once to ask Mr. Wheelhouse to tap the pericardium. Mr. Wheelhouse was, therefore, called in to see the patient.

The extent of the pericardial dulness was now accurately defined, and the probable position of the apex of the left ventricle and of the auricle was as far as possible ascertained. Mr. Wheelhouse determined to open the sac half an inch from the sternum on the left side and opposite the upper margin of the costal cartilage of the fifth rib. He passed in a fine trocar, inclining it slightly upwards and inwards, so as to enter, if possible, opposite the centre of the left ventricle. He pushed it onwards until he could distinctly feel the movements of the heart with the instrument ; and then, sheathing the point, he pushed the canula well up to the heart until he could both feel and see the impulse. The trocar was then wholly withdrawn, and the fluid allowed to escape. This it did in a steady stream at first, which soon subsided into a saltatory flow coincident with

the heart's contractions. The fluid consisted of a pale-pink coagulable serum. On the whole, about two and a half or three ounces escaped During the operation the patient gradually obtained relief, and after the canula was withdrawn, the bed rest was removed, and he was able to lie down. The breathing was now only 36 per minute, and he was able to speak a few words, and express that he felt relieved. The pulse had lost its rapid and struggling character, and could easily be connted, its number being about 110. The area of dulness was very decidedly lessened, but it was not thought well to tease the patient again with a minute examination. Mr. Coleman was good enough to sit up all night with the patient, who passed it in tolerable comfort, though there were several threatnings of syncope, which were warded off by large and repeated doses of brandy ; all other medicines were omitted.

Next day the cardiac dulness had not increased. On the evening of this day (September the 26th) the breathing again came more laboured, and considerable delirium came on. Another large blister was placed over the region of the heart, and half a drachm of liquor morphiæ was given : ten drops were ordered to be repeated every six hours. A comfortable night was thus passed.

On the whole, the patient may be said to have steadily improved from this time, and on October the 13th he was discharged cured. The pericardial dulness on his discharge was little, if any, beyond the normal extent. There was a loud blowing systolic murmur heard over the apex. —*Medical Times & Gazette.*

ON REMOVAL OF THE ENTIRE TONGUE.

By Thomas Nunneley, Esq., Leeds.

The operation for the removal of the entire tongue may, without hesitation, be declared one of modern surgery ; so modern, indeed, that I believe it belongs to the latter half of the nineteenth century. Though portions, larger or smaller, of the tongue have, from time immemorial, been in various ways removed, the idea of its being feasible to remove the whole of the organ does not appear to have been entertained, or, if ever entertained, ever to have been put in practice. So strong in all ages has been the popular idea for the necessary presence of at least some portion of the tongue, that, when the historian of the introduction of Christianity into the Roman Empire recorded, amongst other gross barbarities to which the converts were subjected, that one of the martyrs who had the tongue torn out not only survived, but afterwards spoke, he thought it necessary to call in the aid of direct miraculous intervention as the only explanation of so astounding a fact. Referring to this statement, Gib-

bon, who, as is well known, had no belief in miracles, sneers at the credulity of those who can believe in the possibility of such a mutilation being recovered from, and regards the whole statement as a romance. So also accounts have from time to time reached the western world, of the barbarous chiefs of some of the tribes in Central Asia, as an extreme measure of political vengeance rather than of criminal punishment (for which it appears to have been considered too horrible), ordering the tongue to be torn out, and the occasional surviving of the victim. Though the evidence in support of the truth of the stories, obtained by one of our ambassadors at the Persian Court. and by other persons in the East, would have been considered in many matters of inquiry sufficient to justify the belief in the statement, still so opposed was the general opinion to the possibility of any one living and speaking after such mutilation, that most commonly it was thought the well known tendency to exaggeration and mystification in these regions had imposed upon the credulity of those who related the tales. This opinion was rather confirmed than not by the fatal result which followed in the first two cases in which the operation was performed by a British surgeon, and by the very discouraging conclusions which he arrived at on a consideration of the operations. Mr. Syme says: "I think there should be no hesitation in deciding against the repetition of this procedure. In promoting the progress of surgery, it is hardly of more consequence to determine what is expedient than to ascertain what is not expedient; and I venture to hope that the experience now related may not prove useless, by saving others from the disappointment which I have myself experienced." (*Lancet*, Aug. 14th, 1858, p. 169.)

The reasons which mainly have weighed with surgeons in deterring them from attempting to remove the entire tongue, are—

1. The difficulty of reaching the base of the tongue so as to cut through it.

2. The difficulty in arresting hæmorrhage in a part so deeply seated, so elastic in texture, and supplied with large arteries in immediate continuity with the carotids.

3. The immediate danger to life from other important organs becoming involved.

4. Even though the immediate danger be escaped, the improbability of life being maintained for any lengthened period, owing to the difficulty in deglutition and the loss of the sense of taste.

5. The miserable condition to which it was supposed the sufferer must be reduced by condemnation to perpetual dumbness, from the loss of what has been universally regarded as the necessary instrument of speech.

Yet, in practice, it has been found that none of these reasons possess nearly the same importance which has been assigned to them. The entire tongue may be removed without any very great difficulty. The hæmorrhage is not necessarily severe; in some cases there has literally been none; and in no case has its arrest been difficult. The immediate danger to life has not proved great. Instead of deglutition being rendered impossible by the ablation of the whole tongue, on the contrary, after the first soreness caused by the operation has passed off, the patient is found, as compared with his previous condition, to be able to swallow both solids and liquids with facility. Indeed, no one who has not watched a person wholly without tongue, would be prepared to see him drink off half a pint of beer without stopping, as I have repeatedly seen more than one person do. The sense of taste is not lost, but remains in a considerable degree; and, so far from emaciation following the operation, in every case which I have seen, the patient has rapidly improved in flesh and strength, which may partly, no doubt, be attributed to loss of the pain and want of sleep he has suffered, but to which the improved facility of deglutition mainly contributed. So far from dumbness ensuing, the loss of the diseased organ is speedily followed by greatly improved articulation; and the power of speaking and reading aloud with sufficient distinctness to be easily understood is surprising. Indeed, one of my patients, who was fond of exhibiting his power, when in company often took part in the conversation, and contrived to lead it towards the subject in which he was so interested, frequently had to exhibit his empty mouth before his incredulous companions would believe him to be without a tongue.

I have now operated five times. In four of the cases the entire tongue was removed; in the other, more than two-thirds of it. In two of the patients, no constituted disturbance whatever followed; one did not even require an opiate; and in two others, the disturbance was very slight and temporary. In the first case only were there any dangerous symptoms; and even this man, on the separation of the tongue, immediately recovered. Much of the trouble and suffering in this case arose from its being a first operation, and the unfortunate *contretemps* of the chain of the *écraseur* breaking, and thus necessitating a different and far more tedious proceeding than that originally intended. Hence I think I am justified in saying that, as compared with other important operations, the removal of the entire tongue is not a very dangerous one. It would be difficult to point out one new capital operation, in which, in the hands of one surgeon, all the cases—five in number—have recovered.

I allude now only to my own cases, because, while I would desire to

speak with the greatest respect of the operations of Mr. Syme, whose boldness in conceiving, and whose practical skill in executing, any surgical procedure, all must confess and admire, I cannot dismiss from my mind the feeling that the fatal termination in his first two cases resulted rather from mischief inflicted in reaching the tongue than from the removal of the tongue itself. As in a third and more recent case success rewarded the operator, his former decided opinion as to the unjustifiableness of removal of the tongue, above quoted, has been modified.

The operation which I now perform is not a very difficult one. I need not detain the members with the various modifications which the plan of operation has undergone; but merely state that adopted in the two last cases, which appears to be as simple as possible.

The two great indications to be kept in mind are, the removal of the organ just anterior to the epiglottis, with as little disturbance of any other part as possible, and the avoidance of hæmorrhage, which, if free, would be found very difficult, if not impossible, to arrest. This latter indication is to be attained by using the *écraseur* for dividing the tongue, instead of a sharp cutting instrument; this being one of the very few exceptions in which, in my opinion, the *écraseur* ought to be allowed to usurp the place of the knife.

No knife is required, and only one small external wound is made.

I take a sharp-pointed curved blade, about four inches long, and of just sufficient thickness and breadth to carry the wire-rope of the *écraseur*. This rope I have made somewhat thicker than those ordinarily supplied by Messrs. Weiss, with Hick's instrument, and I always have a second in reserve in case the first one should give way. The middle of the rope should be attached by a piece of string to an eye made in its broad end. The patient reclining on his back in a semi-recumbent position, this blade is plunged exactly in the median line, between the base of the jaw and the os hyoides, but somewhat nearer to the latter than to the former, into the mouth, and brought up at the frænum linguæ, and so out of the mouth, the wire-rope following. A good sized loop of the rope must be drawn through, and the needle cut off. The rope must now be carried well back and spread over the base of the tongue, the tip of which being then drawn through the loop, is seized with Luer's tongue-forceps, and pulled forcibly outwards and somewhat upwards. Two or three long and stronge hare-lip pins, somewhat curved towards their points, should next be carefully thrust from the underside of the anterior attachment of the tongue through its substance, and brought out on its upper surface as near to the base as possible. One of these pins should pass on each side; and if a third be used, it should traverse the median line. Their

points should just appear on the upper surface, and over them the rope should be carried. They will thus serve to prevent its slipping forward when it begins to be tightened, as it might otherwise do. They are not absolutely necessary, but I think are useful, and give rise to very little pain; besides which they serve to indicate the exact portion which has to be removed. Of course, the larger this is, the more carefully must the pins be carried well back. The screw of the instrument should now be turned so as to gently fix the wire, that it may not move from the line in which it is intended to cut.

Hitherto very little pain has been inflicted, and the voluntary efforts of the patient have been useful in facilitating the proceedings; but at this stage he should be put fully under the influence of an anæsthetic so that he may not feel, and the screw of the *écraseur* be steadily but very deliberately turned, the tongue being forcibly extended. It speedily becomes strangulated, and is cut off. The operator must be prepared to find in most cases considerable resistance, and to employ more force in turning the screw than possibly, *à priori*, he might anticipate would be required; though, as the force necessary varies considerably in different tongues, he must be on his guard, or the wire may cut through too rapidly, and serious bleeding from the lingual arteries may ensue. To meet this contingency, I have always had in readiness different forms of cautorising-irons, as well as the solid perchloride of iron (in a liquid state it is of very little use in free deep hæmorrhage), though in only one case has there been any bleeding whatever from the divided base. In that case—the last one in which I have operated—the tongue yielded with much less force than it had done in any other, and was cut through more rapidly than I had intended it should have been. For a moment there was free bleeding from one lingual artery, but none from the other. Though the mouth of the vessel could not be seen, the part was seized with forceps and a ligature placed upon it, when the bleeding at once stopped and did not return.

The small submental wound has in every case healed by the first intention. The mouth and pharynx for the first thirty-six hours are painful, and deglutition is difficult; but these symptoms very soon mitigate, and the patient is able to swallow liquids, though I think it in all cases advisable to administer nutritious enemata and opiates, and thus keep the throat quiet. A little ice placed in the mouth is usually very grateful. In a fortnight or three weeks the wound heals. The two last cases I had, a man and a woman, both returned home in three weeks quite well. It is surprising how speedily the patient improves in condition. The cessation of the horrible pain and restlessness caused by the disease

seems to enable the patient at once to rally, and to counterbalance any shock which the operation might otherwise inflict.

In the first case I operated upon, there was certainly diffuse inflammation of the lungs, which rendered the patient very ill for the first few days. This was, as I have already said, rather to be attributed to the mode in which the operation was performed than to any inevitable sequence on removal of the tongue.

It must not be understood I am for a moment asserting, that the operation will be a permanent cure in all cases of cancer of the tongue, any more than the removal of a cancerous tumour in other situations of the body will secure immunity from relapse; but of this I am confident that, by affording the means of removing a larger portion than has formerly been thought to be practicable, and inducing an earlier performance of the operation, so as to secure the entire removal of all parts involved in the disease, it will, in accordance with all practical teaching, give the patient a far better chance of recovery, and, should the disease have been local, and not dependent upon a constitutional diathesis, this may be permanent.

Even in cases which are far advanced, when the pain and distress are great, as they commonly are, I would not hesitate, if I could get fairly beyond the part of the tongue actually involved, after what I have seen, to operate, as a means of prolonging life and lessening suffering, even though I felt confident that the disease could not be effectually eradicated. Thus, I have operated in a man, and also in a woman, in whom the submental glands were implicated. The tongue occasioned so much distress, there was no sleep at night, articulation was so indistinct, and talking so painful, that they could not be understood, and deglutition was so difficult that both were literally starving. On the removal of the tongue, each patient at once rallied, gained flesh and strength, could swallow with comparative ease, and articulate so as to be readily understood. Though in both the disease in the glands progressed, as was anticipated, it did not reappear in the stump of the tongue, and thus the downward path was not only rendered much slower, but it was relieved of much of its horror.

One man upon whom I operated continued quite free from any return of the disease for three years, when he died from hereditary phthisis, accelerated by continual intoxication. Two died, as I have just mentioned, from development of the disease externally to the mouth and in the abdominal viscera. The other two are alive and well, and pursuing their ordinary avocations: the woman attending to her house-work, the man following his trade as a carpenter. The latter says that he is as well as he ever was.—*British Medical Journal.*

ON THE TREATMENT OF ANEURISM BY ACUPRESSURE.

By Henery Lee, Esq., F.R.C.S., Surgeon to St. George's Hospital.

It is an opinion very generally entertained that the primary object in the treatment of aneurism should be to retard the circulation of the blood through the tumour, so as thereby to increase the quantity of coagulum in the sac.* Two propositions are here taken for granted: (1) that the coagulation depends upon the slowness of the motion of the blood; (2) that the cure is in some way associated with the amount of the coagulum. Upon each of these subjects I would offer a few very brief observations.

1. Is it true that slowness of motion is the essential condition which favours or induces coagulation of the blood in the living vessels? Hunter tied the carotid artery of an animal in two places; the intervening portion of the vessel must have been full of blood, yet when the animal was killed some days afterwards, a coagulum was found adjacent to one of the ligatures only. The preparation is preserved in the museum of the College of Surgeons. I have placed a ligature upon the jugular vein of an ass, and had the animal killed at the expiration of forty-eight hours. On examining the parts, I found only a very small, loose, floating coagulum in the vein above the ligature: there was no appearance of any clot having adhered to the lining membrane of the vein, nor was there any deposit of fibrin upon it. On the other hand, when blood is withdrawn from the body and beaten with a twig, the rapidity with which the twig is moved does not prevent the separation of the fibrin; or, again, if some mercury be shaken with some recently drawn blood, however briskly, the fibrin will adhere to the moving particles of mercury. These instances will, I think, be sufficient to show that retardation in itself is not sufficient to account for the coagulation of the blood, or for the separation of its fibrin in the living body.

2. Is the cure of an aneurism favoured by a large amount of coagulum?

Hunter thus correctly describes the appearances of a coagulum in an aneurismal sac:—"The firmness and colour of the laminæ in different parts of the tumour are such that it is easy to distinguish an old coagulum from a new one: external laminæ are of a dusky-brown colour, and these laminæ grow gradually redder as we advance inward toward the current of the blood."† He also says that an aneurism arrived at this state generally yields to the force of the circulation. The fact of the inner

* See Holmes' Surgery, vol. iii., p. 362.

† Works by Palmer, vol. i., p. 546.

laminæ of the coagulum being, as he describes them, of a reddish colour, shows that they approach in their composition to ordinary blood-clots, which are very little fitted to perform the duties of permanent repair. Any amount of this material, which can neither become organised nor absorbed, may serve to prevent farther distension of the arc, but cannot assist in the vital union of diseased or injured parts.

In order to understand the real intention of the deposit of fibrin in injured or diseased arteries, we must look to what occurs when the injury is first inflicted, or the disease first commences. At that time we never have a large amount of fibrin deposited. What we see in examining the bodies of those who die of aneurism is the product of long-continued growth. The successive laminæ mark the different periods at which fresh portions of fibrin have been deposited; but as they have been so deposited the layers first formed have become distended before the impulse of the blood. This impulse, the last formed layers, according to the description above given, are still less likely to resist than the first; and so the disease has a natural tendency to increase.

Now, it is a remarkable fact that, in animals, wounds of arteries do not produce aneurisms. We learn from this that there is a natural power by which a wounded artery may be repaired; and we may learn also what the process is by which that restoration is effected.

It has already been stated that the blood does not coagulate or part with its fibrin readily in the living vessels, but that it does so readily when in presence of any foreign body. A wounded or diseased artery presents such a foreign surface to the blood; and however rapidly the blood flows over that surface, it will leave some fibrin adhering to it. The fibrin so deposited in the case of a wounded artery acts as a temporary bond of union between the divided edges. It mechanically glues them together, and, if not disturbed, serves as the bed in which the process of repair is effected. Increased cell growth takes place in the divided edges of the vessel, and this gradually invades the layer of fibrin which serves as the temporary bond of union, until the living cells from opposite sides unite. This is union by first intention. The layer of fibrin in this process becomes absorbed, probably furnishing a pabulum to the cells which grow into it. In a few rare cases the fibrin itself would appear to become organized; but this is an exception to the general rule.

The union of a divided artery and of a divided vein is thus conducted on the same principles, and it is evident that a small quantity of fibrin only is required for the due performance of the process. As soon as sufficient is deposited to unite the divided edges (and this is sure to take place while the blood retains its natural properties), any additional deposit only embarrasses the operation.

In healthy states of the body, wounds of arteries and veins are alike healed in this manner. But it may happen in both that the process is interfered with. In the case of an artery, the temporary bond of union may as soon as it is formed yield before the impulse of the blood. The intention is then not carried out. A fresh attempt is made: a fresh layer of fibrin is deposited, and this in its turn may yield in a similar way; and thus an aneurism is formed, the union by first intention being frustrated by mechanical means. After an aneurism has attained any size, the quantity of fibrin not only prevents the divided coats of an artery from coming together, but actually tends to pull them apart. The opening into the artery is generally much smaller than the diameter of the tumour, and as the outer layers of fibrin are forced outward, they tend to widen the aperture into the vessel. Now, the blood flows almost as quickly through the veins as through the arteries, and yet we do not find aneurisms in veins. In order that the divided coats of an artery may unite in the same way as those of a vein, it is only necessary that they should be placed under the same circumstances. The essential condition is that the layer of fibrin which unites the divided edges should be left at rest until it has acquired sufficient consistency to resist any mechanical causes of disturbance to which the part may be subjected. In this mode of union it is only necessary that the fibrin deposited should be of proper quality, and should not be disturbed. Any larger deposit of fibrin, whether in arteries or veins, is an indication of imperfect action. It shows that the original intention having to a greater or less extent failed, successive subsequent attempts have been made to accomplish the same object. When the healthy natural process of union by first intention takes place, the calibre of the vessel is not obstructed; but in some cases, where the quality of the blood is altered, or where it has become mixed with some other matter, a coagulum of a greater or less extent will form within an artery, and occasionally this will entirely obliterate its canal. Sir Wm. Fergusson showed me some years ago an instance in which he had pressed the coagulum out of an aneurismal sac, and in which the distal arteries in consequence ceased to pulsate. If in such a case the blood were to coagulate around the fibrin so as to obstruct the canal of the vessel for any length of time, a permanent cure of an aneurism situated upon the obstructed vessel might be expected; but, as I have said, with healthy blood it is very rarely that such coagula form within the cavities of arteries which are not diseased.

The statements that I have now made carry conviction to my own mind that neither slowness of motion of the blood, nor any large quantity of coagulum, is necessary for the due performance of the process of union.

It takes places commonly and readily in veins even after a wound has been opened several times, without any obstruction to the circulation; and all that is requisite in order that it may in like manner take place in arteries is that the circumstances may be similar. Thus it is not retardation of the circulation, nor the quantity of fibrin deposited, that is essential for the cure of an aneurism; but some mode of preventing the impulse of the blood upon the newly-formed adhesions: in other words, apposition and rest. These objects may be attained in various ways. Whether intentionally or not, all the operations for aneurism which ha e been introduced, since the severer operation of amputation, as recommended by Pott, and that of opening the sac as advised by the older surgeons have been abandoned, tend to favour these conditions. What has been termed the Hunterian operation does so in a marked degree: the coagulum is left undisturbed, and the impulse is taken off the injured vessel. Instrumental compression, which has lately been used with a considerable amount of success, has evidently the same effect. This practice, as old as the time of Hunter, failed at first from the fact that those who attempted it tried to stop the current of the circulation, and thus produced a degree of pain which it was impossible for the patient to bear. With digital pressure the effect is essentially the same, but the degree of compression must necessarily be constantly varying.

The treatment by flexion is a discovery due to Mr. Ernest Hart. The sac, and consequently its contents, are prevented from being distended by being pressed upon in all directions by surrounding structures. The impulse of the blood, by the compression of the tumour against the upper part of the artery, is at the same time diminished.

Thus in all these methods of treatment the same essential conditions are provided for—viz., rest, and apposition more or less direct of the diseased or divided coats of the artery. It is true that cures have been effected in other ways. Thus the coagulum has been rendered so firm by galvanic action, or by the injection of the perchloride of iron, that it has not yielded before the pulse of the heart; and this is to do by artificial means that which is naturally done in animals. And instances where this mode of treatment has been successful does not in the least militate against the necessity of the two conditions upon which I have insisted.

Now, in the various plans of treatment which I have mentioned, we may observe a gradual progress towards the accomplishment of the same end by more simple means. The old operation involving the opening of the sac was succeeded by modifications of the Hunterian operation. This, in many cases, was superseded by various modes of compression; and this again by the less painful and less tedious plan of acute flexion.

I have now the pleasure of subbmitting to the consideration of the profession what, I believe, may prove a still more simple and more certain plan of treatment, at least in some cases—viz., the treatment by acupressure. I cannot but remember that six years ago I had the pleasure of reading before the Medical Society of London a paper, which was subsequently published as a separate essay. In this I advocated acupressure in certain operations upon the veins—a mode of proceeding which I had at that time practised for a period of seven years. In performing the operation for varicocele it had occurred to me occasionally to wound one of the branches of the spermatic artery, which was not controlled by the needles already introduced. Arterial hæmorrhage would then take place; but this was always commanded by introducing another needle, so as to compress the bleeding vessel. During this period a case occurred which left a strong impression on my mind that the action of arteries in other situations might be more simply and more effectually controlled by acupressure than by other means.

A young man had a wound in the palm of his hand, from which there was a copious hæmorrhage. Various attempts were made to secure the divided ends of the vessel. These all failed. The radial artery was tied, and the ulna artery was tied, and I believe ultimately that the brachial artery was tied; but however this may have been, the arm was at length amputated. It occurred to me that the hæmorrhage might have been restrained by means of needles passed through or underneath the bleeding vessels; and this I mentioned to a friend at the time before the amputation was performed. That such a mode of treatment might be effectual in similar cases has since been fully shown by Sir James Simpson's admirable work on "Acupressure as a Means of arresting Surgical Hæmorrhage."

I will now give a case in which I had an opportunity of putting this plan of treatment into practice in a case of traumatic aneurism.

Henry G——, aged nineteen, admitted into St. George's Hospital on the 16th of September, 1866. On the 9th of September he received a wound on the lower part of the left popliteal space from a sharp knife. The wound at the inner side of the leg passed obliquely outwards to the extent of an inch or more. There was a great deal of hæmorrhage at the time, but this was stopped by a handkerchief being tied round the limb, The handkerchief was allowed to remain untill the 12th, when it was removed, but again applied. There was not any hæmorrhage at this time. Having removed the handkerchief on the 16th, the bleeding recurred. He was now admitted into the hospital. There was a tumour on the lower and rather to the inner side of the popliteal space about the

size of a large chesnut. This could be felt and seen to distend with each arterial impulse. When the tumour was forcibly compressed by the thumb, the posterior tibial artery still pulsated. A consultation of the hospital was held upon the case, after which a long slender needle, previously made for the purpose of acupressure, was introduced immediately to the outside and above the tumour, which was at the same time pressed inward by the point of the finger. The needle was made to penetrate deeply into the popliteal space; its point was then turned inward, and brought out immediately behind the internal tuberosity of the tibia. From the grating sensation conveyed to the fingers at this time, the needle must have passed through some fibrous or tendinous structures. A small quantity of blood escaped at each aperture which the needle had made; this was not of a dark colour, and there was no evidence of any large vessel having been pierced. The pulsation in the tumour stopped immediately that the needle was introduced, but the pulsation in the posterior tibial artery in the lower part of the leg could still be distinctly felt. It appeared from this, and from the experiment previously made of compressing the artery, that the aneurism had arisen from a branch of the popliteal artery, and not from the popliteal itself, and that the acupressure needle must have passed between the main artery and the wounded branch. Although the tumour had ceased to beat, a piece of cork was placed immediately above it and a little to its outer side, and confined in its position by an elastic band passed over the extremities of the needle.

September 20th—There had been a little pain up the thigh, but none near the aneurism: no pulsation in the tumour.

22nd.—The india-rubber band was removed, but the needle was allowed to remain. There was some very slight irritation at the points where the needle passed through the skin. There was no other pain or inconvenience. The skin of the leg for a considerable distance was still discoloured, presenting the appearance of having been bruised.

24th.—The acupressure needle was removed (on the sixth day). Some serous fluid followed its extraction, and a very small quantity of blood. A pad of lint was now placed over the situation that the needle had occupied, and retained in its position by a bandage.

26th.—The pad and bandage were removed. Some dark, grumous-looking fluid escaped from the original wound. No pulsation in the tumour, nor fresh hæmorrhage.

27th.—The bandage was again removed, and a smaller quantity of the same kind of fluid escaped from the wound as on the preceding day.

29th.—The wound discharged only a very small quantity of serous fluid.

Oct. 2nd.—There was now no discharge from the wound. Some thickening could be felt in the situation of the aneurism, but there was not the slightest pulsation. The pulsation in the posterior tibial artery continued natural. The skin of the leg still remained discoloured.

4th.—Feels quite well, and is in no pain. The wound has nearly healed.

6th.—Was allowed to get up.

13th.—Has had no unfavourable symptom since the last report. The discoloration of the limb has disappeared. He left the hospital apparently quite well.

The patient presented himself at the hospital on the 20th, and again on the 27th, when, with the exception of the scars of the original wound and of the acupressure needle, the limb was perfectly in its natural condition.

This occurred in a young man; it was a traumatic aneurism, and it was in a branch only of the main artery. It does not therefore follow that an ordinary aneurism of the popliteal artery would be cured by the same plan of treatment. On the other hand, it must be considered that this must have been a large branch, that it was very near its parent trunk, that it doubtless had its accompanying veins and nerves, and that these sustained no injury from the degree of pressure which was applied to them. Considering that an aneurism of this size and in this situation was so speedily and so completely cured by acupressure—considering that the degree of pressure required is not such as to stop the circulation, and taking into account the fact that an acupressure needle may at any moment be removed, the facts are, I think, sufficient to justify the trial of this mode of treatment in other cases of aneurism. Should increased experience confirm the *à priori* reasoning, there is, I think, little doubt but that it would be a simpler and more effectual way of preventing the arterial impulse than any other hitherto practised.

In conclusion, I may mention that the needles best adapted for compressing large arteries are curved, with rounded, not cutting points. These, when used, should be held firmly in a handle which can easily be removed. With a needle of this kind it is not easy to wound a large vessel in the living body.—*Lancet.*

Savile-row, October, 1866.

THE TREATMENT OF CANCER BY INJECTIONS.

By Charles H. Moore, F.R.S., Surgeon to the Middlesex Hospital.

The ingenious method of treating certain cancerous tumours communicated to the Association at its last annual meeting by Dr. Broad

bent, could not fail to awaken very great interest, because of the singular nature of the novelty and of the success attending it. It is strangely novel, inasmuch as it chemically dissolves the cancerous cell in the midst of the tissues: and it is strangely successful, for it has effected the absolute dispersion of small cancerous tumours, without destroying, as caustics do, the natural textures in which the tumours lay. Both these facts I happened to have the opportunity of demonstrating; and I took occasion to bring them before the Pathological Society of London at its first meeting in the present session.

The introduction of this method constitutes a most important epoch in the treatment of cancer; for the acid is as nearly a specific against the disease as anything can well be—a specific, happily, which is, in a great degree, intelligible in its action, a specific without a mystery.

Like all new remedies, its value needs exact estimating. It is capable of doing certain good; its applicability is still uncertain. There are situations in which difficulties of manipulation may prove insuperable, and the remedy cannot be brought into action against the disease. There are conditions of bulk in some cases, which we do not yet know that a remedy so slow in its action can overcome. There are also misconceptions in our own minds as to the extent to which the disease is diffused; for disappointment consequent on which no remedy is answerable. Acetic acid dissolves cancerous tumours, and the absorbents may remove the inert remnants of it; but the acid does not change the disseminating power of the disease. If fragments be left beyond the limits of a tumour, they will grow again, whether the main mass have been cut away with the knife or dissolved with the acid.

Again, there are dangers to the reputation of the acid as a local remedy which are incident to its misuse. If employed too strong, it acts as a caustic, and produces sloughing; only in a certain degree of dilution is the proper action obtained which was contemplated by Dr. Broadbent.

I have been led into these remarks by the present interest of the subject; but my intention in writing was to refer to the questions raised in the letter of Dr. John Barclay of Banff. Who originated, in whole or in part, the method of treating cancer by injection of the acetic acid? No one can deprive Dr. Broadbent of the credit of the treatment as a whole. He devised it; he employed it; he published it. But others are answerable for the parts; for detecting the action of acetic acid on cancer-cells; for the invention of the syringe and cannula for subcutaneous injections; and for adapting them to throw remedies into the substance of a cancerous tumour.

Dr. Barclay claims to have originated the use of acetic acid in cancer, and he assigns to use the credit of having first treated cancer by injection. I do not know whether either claim can be substantiated.

That Dr. Barclay's suggestion was independent and original, I have no question; it needs only to peruse the account of his valuable comparative experiments with the citric, acetic, and carbolic acids, to perceive that he had obtained good results from the use of acetic acid in cancer in the living subject. I was aware of his observations, having carefully read his paper at the time of its publication, and afterwards employed the carbolic acid, according to the form he recommended, on some of my patients at the Middlesex Hospital. Nothing was further from my intention than to ignore Dr. Barclay's work, of which I do not doubt that, as it certainly contributed to our knowledge of the use of acetic acid, it may also have led up to the choice of it by Dr. Broadbent. It was in connection with the method of injecting cancerous tumours, not with the superficial treatment of them when ulcerated; and it was in contrast with my own injunctions of other substances, that I referred to Dr. Broadbent's happy selection of the acetic acid.

This acid had, in fact, been thought of, and actually used, in the treatment of cancer before 1866. My former colleague at the Middlesex Hospital, Mr. Mitchell Henry, when he had not yet condescended from Surgery to Politics, was in the habit of giving it to his cancer patients as an internal remedy, on this very account of its action on the cells under the microscope. Mr. Henry retired from the profession in 1862. And I was once informed by Mr. Charles Hawkins, that Sir Benjamin Brodie used this remedy in the local treatment of an open cancer of the breast. Dr. Barclay has had the satisfaction which always accompanies the exercise of ingenious and original thought, and that of extending our knowledge of the action of acetic acid; but it does not appear that he has the additional pleasure of having been the first to discover its usefulness in cancer.

My own connection with this treatment is not that of an originator. At least, I did not, in my remarks of October 16th, intend to make that claim. I said that, "as the hypodermic injection-syringe was so much in use at present, it would be surprising if it were not employed in the treatment of cancer." And I said, speaking inexactly, that I had for a year or two, or a year and a half, been trying various remedies introduced in this manner in the treatment of that disease.

Whether I really first used injections in the treatment of cancer I do not know. In a London hospital our proceedings are so public, that that which we originate may be adopted by others as usual treatment,

and may be afterwards published without reference to the inventor, and certainly without the intention of depriving him of the credit of his thought. But Dr. Barclay's letter has led me to refer to my notes, and to cull from them the following history of my doings.

In a clinical lecture on surgery, which I delivered on June 30th, 1860, I detailed a case of lupus exedens in a young woman, which had destroyed the tip and one ala of the nose, had split the lip, and extended far into the nostril. After failing to arrest the disease by ordinary treatment and superficial caustics, I injected, at Mr. De Morgan's suggestion, perchloride of iron into the tissues beneath the disease. At that part the lupus was stopped; elsewhere it went on. In the same lecture, I suggested that the plan was applicable to the treatment of cancer. My first application of the method of injection to cancer is thus due to advice from Mr. De Morgan in what was practically a similar disease. And I am disposed to attribute to this hint from him the direction of my thoughts to that treatment of cancer by zinc after incisions, which I adopted first in a vast rodent cancer of the face, and which has been since frequently practised for those gigantic ulcers with surprisingly successful results. My first patient so treated lived in comfort for three years, until the age of 75; and I presented her before the British Medical Association at its meeting in the College of Physicians in London. The same hint, and the result in the cases of lupus and rodent cancer, led me on to apply solid zinc and zinc paste to the wound after removing a cancerous breast; but, in Mr. De Morgan's mind, his thought produced the more practical and widely useful plan of treating all wounds, cancerous or not, with the zinc solution.

I next find in my notes sundry thoughts on the treatment of cancer, from which I extract the following:

"*Treatment of Cancer.*—It seems to me clear that our methods of treatment for cure fail for want of quantity and continuousness of application. Some medicines cannot be administered in more than a small dose; and we already know that within the limits of their tolerance by the system they are useless for the cure of cancer. Of this kind is arsenic, which influences solid new growths, but kills without curing.

"But if we would alter cell-growth in the body, we must have a long continued stream of the medicinal agent flowing through the cancer. It might be introduced through the skin, as by a long residence in a bath of it, or by wearing it inside a caoutchouc dress. It might be made to saturate the liver by profuse and repeated enemata. It might be inhaled. Only, whatever the substance chosen, there should be enough of it, and it should be long continued.

"Whether the cancer be at first local or constitutional, it is usually already diffused through the system when surgeons operate. From its earliest existence, a cancerous tumour contaminates the system and invades adjoining tissues. These are its first victims, and glands next, which have no power to eliminate its surplus or refuse. Are we then upon the right track in merely extirpating the tumour? We know nothing of a constitutional remedy; have we the completest local one? Subcutaneous injection might do with local deposit what other organs could not—neutralise, dissipate, render it innocuous.

"We want not merely to extirpate the tumour, but to remove adjoining blastema. Could acetate or perchloride of iron, or chloride of zinc, or chlorine, or what not, much diluted, be driven into the tissues all round a growth, beneath it, into it? The tumour might be injected with undiluted, the tissues with diluted solutions. And, after a cutting operation and cicatrisation, could the same be done with the whole region?

"Slow daily injection, as diffuse as emphysema, to wear out the propensity to the disease or to destroy the material of it.

"What is wanted to destroy the tendency to recur in tissues and in glands, is a cutaneous and subcutaneous application of the chloride of zinc. The skin should be soaked in it; the subjacent tissues flooded with it, until the cancer growing elements wear out. The whole region leading to the axillary gland should be acted on, and the tendency of cancer of the breast to grow towards the clavicle should be observed.

"Should this seem effective, some less painful way of arriving at the same result might be discovered.

"If it saved from recurrence, it might also be of service to destroy a young growth, when extirpation was objected to. The progress to glands by the natural circulation would be the means of acting on them, if not diseased; but if diseased, they also should be punctured.

"In the beginning of such treatment of the primary tumour, would any advantage come from underbinding the absorbent vessels below the edge of the pectoral with a wire ligature; so only as to interrupt the current, but not to obliterate and cut through them, as in varicocele? The changes in the primary tissues would perhaps be more complete, if the injected liquid or gas did not so readily run off by those vessels."

Though these suggestions were committed to paper from time to time as they occurred to me in 1859-64, I did not put my thoughts into execution until 1865, when I had some syringes and sharp-pointed cannulæ prepared for the purpose. I first injected into an advanced case of epithelial cancer of the face a solution of twenty grains of the chloride

of zinc to the ounce of water. The effect was severe pain, which was over in an hour and a half, and œdema around the diseased parts which were infiltrated with the liquid. I have not kept the date of this operation.

The next case was one of cancer of the breast, sent me by Dr. Rowe of Margate. The disease was in an advanced stage, and unfit for ordinary operations. My report of the injection is as follows:

Nov. 10th, 1865.—The parts being all quiet, though the dull vascularity of the skin towards the sternum continued, I made the first injection to-day. Having a long silver cannula, steel pointed, screwed on a vulcanite syringe, and in order, I filled it with a solution of chloride of zinc in distilled water, of the strength of one grain to one ounce. Then, introducing the cannula about an inch from the middle of the sternum below the red part, I slowly thrust it up in the subcutaneous tissue for two inches. I held it steady for a minute or two, that the bleeding in the track of the puncture might cease, and then slowly injected three drachms of the solution. No hæmorrhage occurred; the fluid formed a long bulging prominence, which soon spread out and lost its tension; and, on withdrawing the cannula, no fluid escaped. I dressed it with collodion. The puncture hurt a good deal; and she complained of the stinging of the solution the instant I began to inject it. The latter pain was at once relieved when the cold collodion was laid on, but it returned, and then gradually lessened.

Subsequently, within a brief time, the pain recurred and became severe. It kept her awake till 3 A.M.

Nov. 11th.—There was swelling over the injected spot and along the chest for two or three inches towards the axilla; redness of the skin from the same spot over the fold below it to the furrow next adjoining; much tenderness over the spot and soreness to the mesial line, the inner end of the right clavicle, and rather beyond the redness outwards. No inconvenience in the armpit or tumour. She had suffered so much that she determined to leave to-day. Lest the injected spot should suppurate, I ordered a lead lotion, and requested her to show it on Monday.

Nov. 13th.—She returned to the hospital to-day before going to the country. The redness and swelling had much diminished, and they were now chiefly concentrated over the small remaining swelling from unabsorbed injection. This part was still, but much less, tender; and the integument over it seemed a little more supple than before the injection was made. There was now no more appearance of suppuration.

This excessive and long continued pain, which had led to the patient's abandoning the plan of treatment, may have been simply due to the

chloride of zinc as such. Or it may have been more than usually severe on account of the contact of such a liquid with the deep surface of over-vascular and over-sensitive integument. Or it may have been the result of throwing in a quantity so large as to keep too much in contact with the tissues, and for too long a time.

In the first case, it is remarkable that the pain should have continued so long with one grain to the ounce, while with twenty grains to the ounce the pain was over in an hour and a half. In this latter, however, I threw in two drachms of the liquid, of which not more than one drachm remained. The result, both in that and in this case, was inflammation, without suppuration, and in each patient it far exceeded what I desired to produce, namely: a modification of the nutrition of the local textures. Nevertheless, I have confidence in the zinc, if it be reduced to a bearable strength. I had a solution of pure chlorine prepared, hoping to try it in Mrs. P.

In the second case, the pain may be evaded by making the injection under uninflamed skin, and parts having no tenderness. It is worthy of special notice, that though so irritating, the solution was not of a kind to produce suppuration; a fact closely corresponding with Mr. De Morgan's observation of the result of applying zinc on raw surfaces. It prevented the formation of the pus, even by a tissue already prone to it.

The third suggestion refers also to what may be avoided in future. Whatever liquid I may throw in, which is capable of producing irritation, must be in quantities not exceeding a drachm, and a half drachm might be better. By one puncture in the skin half a drachm might be thrown in in different directions, the north, east, south, and west, of the compass. When thus brought into contact with more tissue, there is more probability, both of its early diffusion and of its speedy chemical union with the albumen of the tissues.

Feb. 10th, 1866.—Mrs. P. was sent back by Dr. Rowe. She had lately lost some sloughs from deep parts of the breast, which she extracted through the chinks. At the bottom of these were now deep clean cancerous ulcers. She suffered much during their detachment. The whole mass was smaller than it had been, and looked quiet. There was no increase of the axillary disease, and she suffered little at present. The injected spot was not now larger than an almond, was red on the surface, was tender, and fluctuated.

After this, I made trial of a still stronger solution of the chloride of zinc. The case was one in which cancer was recurrent in the cheek after an operation. I extract from my notes the account of so much as relates to the injections.

Dec. 21st, 1865.—The wound was granulating healthy in all but two parts; at the lower lip and along an inch of its lowest edge. At both these parts, the granulations are prominent, the skin firm, and the appearance cancerous. I injected chloride of zinc, forty grains to the ounce, into and beyond the cancerous parts; introducing the sharp fine cannula on the granulating surface, and injecting in various directions a few drops of the liquid. Very sharp pain (he compared it to an adder's sting) immediately came on, and continued more than two hours. The next day there was whitening of the cancerous granulations without slough, and some œdema and trifling swelling of the lips and cheek, and of the neck near the lower injected edge. The day following it had nearly subsided.

Dec. 25th.—The injected parts had dried, shrunk, and apparently sloughed.

Jan. 4th, 1866.—I removed a thick large slough, the remains of tissue killed by the injection.

Jan. 8th, 1865.—I endeavoured to inject into the healthy tissues of the lower lip, through the doubtfully diseased granulations of that part, a little of the filtered sediment of liq. calcis. Through one aperture, I pushed in two directions half a drachm or less; but the third puncture was useless, as the canula became clogged, and the clear liquid oozed through at the joint under the pressure I used against the piston. None of the material passed into the tissues.

Jan. 15th.—Little result; only trifling swelling. Cancer remains in the anterior part and rather increasing. I injected a saturated solution of sulphate of iron, which stung, but in a different way from, and less severely than, the chloride, and continued more than an hour. The result was an ink-black slough of the injected part.

Since writing the principal part of this communication, I have become aware, by a letter in another journal, that Sir James Y. Simpson must be regarded as the author of the method of injecting medicinal substances into tumours, as he actually practised it with success about ten years ago. This announcement renders further discussion of the priority in originating that method unnecessary. My observations on the subject may nevertheless appear to you worthy of consideration for their own sake.—*British Medical Journal.*

Midwifery and Diseases of Women and Children.

OVARIAN PREGNANCY, WITH DELIVERY OF THE FŒTUS PER ANUM—PERFECT RECOVERY.

A case communicated to the *Gesellschaft fur Heilkunde*, by Dr. Julius Beer, of Berlin. The wife of a merchant, of Berlin, thirty years old

was, as primipara, in 1856, safely delivered. In November, 1862, she felt somewhat unwell, and had severe pain in the left hypogastric region, which showed an egg-shaped swelling. It was treated as wind colic, but the condition became worse. The catamenia ceased for nine weeks, but pregnancy was not made out. The patient was then seen by Dr. Hildebrandt, who made the diagnosis of a pregnant (?) uterus (uterus contentum), without, however, being able to give a decided solution of the question. Ordered absolute rest in the recumbent posture, oatmeal poultice for twenty days on the tumor in the ovarial region. The patient was also ordered, by a *sage femme*, to take a cold sit bath twice a day, with a view to the removal of hæmorrhoids. Naturally enough Madame G. became very sick, and Dr. Hildebrandt found, on exploration, excessive painfulness of the swelling, for the relief of which many leeches were applied. At the next consultation, an entirely normal pregnancy was diagnosticated by one physician, and denied by the other. In the seventh month of pregnancy, the patient took a great many laxatives, on account of constipation of the bowels. In the meantime the writer was called, who examined the uterus very closely, and gave the opinion that the woman was not pregnant, but that an abortion had taken place some time before. The tumor in the left hypogastrium I did not find. The woman, with whom I was previously entirely unacquainted, informed me that she had suddenly got very thin, and hence I formed the idea that perhaps there had been a mole (mola), and I ordered something for the relief of the abdominal pain. As I afterwards learned from a relative of the patient, on the 2nd of January, 1864, after an almost colliquative diarrhœa, with very great pain, two skull bones, as symmetrical as oyster-shells, the parietal bones of a fœtus, with other very fœtid parts, were passed per anum.

This is a fact, as substantiated by actual sight, for I know that there was a case where it was possibly simulation, in order to make the subject of it interesting. (The writer here speaks of similar cases.) Pathological anatomy has shown that in such cases a sac is formed, which is united with a loop of intestine, whereupon this intermediate partition-wall is broken through to allow the bones to pass. Whether all the parts of the child followed those which have been enumerated in this case is not certain. It is probable, however, since the patient Frau G. remains well and without pain.

Dr. Hildebrandt describes the same case as follows: "Frau G. came under my treatment December 30, 1863. *Status præsens.*—Intumescentia uteri; left ovarial region very painful and somewhat swollen; shooting pains in left hip; suppression of menses for more than two

months; slight fever. *Course.*—Pain in the side and hip, increased at times to unbearableness; sleepless nights. Jan. 13.—Consultation with Geh. Rath. M., who believed there was a normal pregnancy between the third and fourth months. In February the pain abated, and on the 22nd of February a hæmorrhage from the genitals occurred, which lasted some days. On the 1st of December patient was again under treatment, with a diarrhœa which had existed for almost two months, with intermitting hardness of the bowels, inducing a permanent sense of pressure. The tumor in the side had disappeared. *Uterus normal. Menses for some weeks regular.* Passage of the ossa parietalia on the 28th of December. Patient now well."—*Deutsche Klinik,* Nov. 9, 1866.—*Medical Record.*

THE ABETMENT OF CRIMINAL ARORTION BY MEDICAL MEN.

By Horatio R. Storer, M.D., of Boston, Assistant in Obstetrics and Medical Jurisprudence in Harvard University.

In a previous printed communication* I furnished additional evidence to that I had already presented to the profession, of the frequency of abortions, both explainable and unexplainable by natural causes. It may be recollected that, so long ago as 1857, a statistical return was rendered to the Suffolk District Medical Society, from my private practice, based upon inquiries put to patients who were not merely married and of repectable character, but of good social standing, from which it appeared that intentional abortions must be of very much greater frequency than had been supposed. This result, being based upon positive evidence, that of confession, could not be invalidated by the doubts of any gentleman who had not pursued a similar course of inquiry, and the point which it involved has since been corroborated by many credible witnesses.

From the date referred to, a period of nine years, I have now steadily kept one end in view, and from a constantly increasing practice, at first more particularly and for several years entirely devoted to the special diseases of women, I have been led to recognize certain general laws, to which I shall now but briefly allude. Among these are the following:

1. That while, owing to the advance of our knowledge in the treatment

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*Studies of Abortion. Boston. Med. and Surg. Journal, Feb. 5, 1863.

of child-bed, more children are born living than formerly and more mothers saved, and owing to our wiser treatment of the diseases of children and their exposure to better sanitary conditions, a much larger percentage of them reach maturity, yet among the better class of inhabitants fewer infants are born; that is to say, that the average number of births to each Protestant family is less than it was half a century ago.

2. That of the pregnancies in reality occuring in this class, fewer reach completion.

3. That of the instances of conjugal intercourse taking place, fewer result in impregnation.

4. That of these incomplete pregnancies and apparent instances of sterility, a large proportion are intentional.

5. That such willful interference with the laws of nature is productive, as might have been expected, of a vast amount of disease—disease whose causation has been unexplained, and whose character is made evident alike by the confessions of the patient, and by the results of a more natural course of life.

5. That intentional abortions are a greater tax upon a woman's health and more surely followed by uterine disease than pregnancies completed, and this even though the patient may seem to rally from them with impunity—the result showing itself, if not immediately, then after a lapse of years, or at the turn of life.

7. That the systematic prevention of pregnancy, by whatever means, is also followed by prejudicial effects, affecting the nervous and the uterine systems, not unfrequently producing sterility from an organic cause, and laying the foundation of serious or incurable disease.

8. That when such prevention is occasioned by incompleted intercourse whether effected by the use of capotes or by untimely withdrawal, the effect is equally bad for the husband's health as for that of the wife—there resulting dyspepsia, functional or organic nervous disease, and at times impotence, temporary or persistent.

To the latter of these dogmas, partially included as are its cases in the range of my present professional observation, I am glad that I have the support of my friend, Prof. Bumstead, of New York, who is now known as the best American authority in the sexual diseases of men. He has lately written me as follows:

"I would gladly talk with you about one point you allude to in your letter, to wit, the effect upon the health and upon the genital power of various preventives against conception. In the early part of my practice I was exceedingly sceptical with regard to any evil resulting therefrom; but I have so often been applied to by men complaining of loss of virile power,

and who, I have found, have been in the habit of 'withdrawing' or else using condoms, that for several years past I have looked upon this as a cause of impotence."*

As to the physical evils of forced abortions and of the prevention of pregnancy, no one who is at all devoted to the study and treatment of the diseases of woman can have failed to perceive them, and scarce an author has dared to approach this subject. Not a word upon it is said by Whitehead, the best English authority upon abortion and sterility; not a word by Gardner, of New York, the best American systematic writer upon the latter topic, and it has not been referred to by Marion Sims, in his work just published. The evils alluded to seem to have first been distinctly pointed out to the profession by my father, in 1855, in an Introductory Address, delivered to the class at Harvard Medical College; and yet such was the fear of several of the faculty at that time lest the facts in the case had been misobserved, or lest erroneous conclusions had been deduced from them, or lest their avowal might prejudice the school in the eyes of the community, that they urged upon their lecturer the suppression of the very pith and marrow of his address. I am sorry to say that the gentlemen carried their point, but I know the concession was only one of courtesy and by no means one of conviction. If our alma mater, in any of her provinces, ever fears to allow the truth to be spoken, she is recreant both *Christo et Ecclesiæ* and to all her old traditions, and one at least of her sons will not hesitate to upbraid her for violating the ethics she herself has taught him.†

The physical evils to women, of which I have spoken, have been deemed by the American Medical Association of sufficient importance to warrant an appeal upon the part of the profession to women themselves, a course which was long ago warmly commended by excellent authorities as by the *Boston Medical and Surgical Journal*, in an editorial article published, Dec. 13, 1855,‡ and the little "Why not? a Book for every Woman," that is now circulating throughout the country, in obedience to the command of the Association, may do something to prevent the evils which we are often anxious but powerless to cure.

I have more than once urged upon the profession the interference with the normal process of procreation, whether by preventing pregnancy, or by

* I took occasion to refer to the above topic in my article on the "Medico-Legal Relations of Rape" (this Journal, Nov., 1865), and to Dr. Bumstead's corrobation of my opinion.

† For a free discussion of this whole matter, see the Boston Medical and Surgical Journal, for December, 1855, p. 409.

‡ Ut Supra, 4. Boston: Lee & Shepard. 1866.

cutting it short when established, was a serious cause of injury to the nervous as well as to the uterine system.

These views have been presented more distinctly in the last published volume of the American Medical Association.* Every day more and more confirms me in my conviction concerning their truth, and it is within the present week that, at a long and most interesting personal conference, my good friend, Dr. John S. Butler, Superintendent of the Retreat for the Insane, at Hartford, has communicated to me, from his own private and public practice, many cases of insanity in women, based as to causation upon the induction of criminal abortion, and the systematic prevention of pregnancy. They are simply corroborative of what I have myself repeatedly observed.

Upon all the points that I have indicated there is very much of interest that has never yet been said, and for this, it must be confessed, there is pressing need.

It has become useless for any one to allege, as has so often hitherto been done, that attention must not be given or called to these important subjects. Some of the most intelligent physicians of Great Britain and the Continent are now engaged in their investigation. The sexual relations lie at the very foundation of society; their aberrations are not the result of chance, but of an efficient cause; when general and common, then, these are occasioned by habits and customs which rest directly upon the moral sense of the community. The abnormal customs referred to are productive of much disease and of many kinds; and these, like all others, whatever their symptoms, can only be rationally treated by reaching their cause. It is untrue that discussion but spreads the evil. To cure a fetid and burrowing sore, it must be freely laid open and exposed.

In the present paper I intend to confine myself to the consideration, and this but partially, of a single point—interesting to every member of the profession—namely, the abetment of criminal abortion by medical men.

To the importance of this question, and to some of its aspects, I have already alluded in the sixth of my eight serial articles upon the medico-legal relations of abortion, published in 1859, in Philadelphia,† in which I spoke of the various manners in which members of our profession innocently, but very directly, become abettors of the crime. It was there shown that by any apparent disregard of the existence or sanctity of fœtal

* Transactions of Am. Med. Association. Vol. xvi., 1865, p. 122.

† North American Medico-Chirurgical Review, July, 1859, p. 643.

life, however evinced, we in reality increased its disregard by the community. If a physician appear to consider an unborn child of little or no account, why should not his patients also? I have also referred to this same unintentional abetment of abortion by medical men, in the prize essay of the American Medical Association.*

Few will doubt that my opportunities have been good for observation in this matter. The decided opinions that I have avowed, met as they were at first by so free expression of scepticism and indeed of denial, could but awaken a corresponding degree of interest in minds alive to the importance of the subject; and my repeated consultation, personally or by letter, concerning abortion by many of the leading practitioners of this country may perhaps give a weight to the remarks I may now make, that formerly might have seemed presumptuous for me to claim.

It will be recollected that in 1859, by order of the American Medical Association, a memorial was presented in its name to "the several Legislative Assemblies of the Union, with the prayer that the laws by which the crime of abortion is attempted to be controlled may be revised, and that such other action may be taken in the premises as they in their wisdom may deem necessary;" and that the association requested also, by formal memorial, "the zealous co-operation of the various State Medical Societies in impressing this subject upon the Legislatures of their respective States." †

This action was based upon a long, careful and very thorough examination of the whole subject by a committee consisting of Drs. Blatchford, of Troy, N. Y. (now lately deceased); Hodge, of Philadelphia; Pope, of St. Louis; Barton, of South Carolinia; Lopez, of Mobile; Semmes, of the District of Columbia; Brisbane, of Wisconsin, and the writer, who were unanimously of opinion that the action desired was necessary.

A similar conclusion had previously been reached by a committee appointed by the Suffolk District Society, of this city, in 1857, consisting of Drs. Bowditch, Calvin Ellis, and myself; and yet—in the face of the fact that in this commonwealth, according to the reports of Attorney-General during the eight years from 1849 to 1857, omitting 1853, as there seems to have been no report rendered for that year, there were thirty-two trials for abortion, and not a single conviction—the Councillors of the State Medical Society of Massachusetts, to whom the propriety of a professional appeal to the Legislature for more protective statutes had been referred, decided

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*Trans. Am. Med. Association, vol. xvi., 1865, p. 709.

†Trans. of Am. Med. Association, vol. xii., p. 75.

that "the laws of the Commonwealth are already sufficiently stringent, provided they are executed."*

It is not, however, the stringency of a statute, so far as by this is meant the severity of its punishments, but the certainty of their infliction, that is efficient to check a crime. By the laws of Massachusetts, the crime of abortion is considered as mainly against the person of the mother. In the case of her death, already sufficiently provided for at common law, convictions can indeed be effected, though with great difficulty, under the statute. If she lives, the crime practically goes unpunished. It is true that a few convictions have been obtained with us during the three years since 1863, but only by great effort, and probably in consequence mainly of the attention we have directed to the subject.

I have elsewhere called attention to this fact and to its explanation. "It has been thought, even publicly argued, that in the fact that statutes against abortion are almost everywhere not only not enforced, but not attempted to be enforced, there is afforded strong evidence of the existence of an ultimate and absolute impossibility of thus meeting the crime. The idea, though a fallacious one, is yet attributable to an important and evident cause.

"That the prevalence of abortion is in great measure owing to ignorance of guilt, on the part of the community at large, we have shown. We now assert that its futile prohibition by the law, is toleration, are plainly in consequence of similar ignorance on the part of legislators and of officers of justice.

"Our communities form their own laws, and, therefore, as was pointed out at the commencement of our remarks, these must necessarily bear the stamp of public opinion; while the officers by whom they are to be enforced—jurors, attorney, judge—looking to the only source possible for their enlightenment on this subject to medical men, have hitherto found but few

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* Medical communications of the Massachusetts Medical Society, 1858, p. 77. How different from this was the action of the State Medical Society of New York. At its anual meeting of 1860, "Dr. Brinsmade, from the committee appointed to consider the recommendations of the American Medical Association, reported the following resolution, which was adopted: "That the society cordially approves of the action of the American Medical Association in its efforts to exhibit the extent of the evils resulting from the procuring of criminal abortion, and of the means which are to prevent its commission, and cheerfully comply with the request to a zealous co-operation for the furtherance of more stringent legislation in regard to this most destructive and revolting crime, committed almost with impunity, and with appalling frequency."—*Philadelphia Medical and Surgical Reporter, Feb.*, 1860, p. 457.

bold and honest statements, and these unindorsed by the mass of the profession, or, in their total silence, a practical sanction of the popular belief. This is no exaggeration; the assertion is fully borne out by facts. Need we wonder, then that the laws are not enforced, that indeed their enforcement is not attempted?"*

The causes of the general demoralization as regards childbearing I have elsewhere explained.

"There are three of these causes, however," say the committee of the American Medical Association, "and they are the most important with which the medical profession have especially to do.

"The first of these causes is a wide-spread popular ignorance of the true character of the crime—a belief, even among mothers themselves, that the fœtus is not alive till after the period of quickening.

"The second of the agents alluded to, is the fact that the profession themselves are frequently supposed careless of fœtal life; not that its respectable members are ever knowingly and intentionally accessory to the unjustifiable commission of abortion, but that they are thought at times to omit precautions or measures that might prevent the occurrence of so unfortunate an event.

"The third reason of the frightful extent of this crime is found in the grave defects of our laws, both common and statute, as regards the independent and actual existence of the child before birth, as a living being. These errors, which are sufficient in most instances to prevent conviction, are based, and only based, upon mistaken and exploded medical dogmas. With strange inconsistency, the law fully acknowledges the fœtus in utero and its inherent rights for civil purposes; while personally and as criminally affected, it fails to recognize it, and to its life as yet denies all protection."

To the action of the Councillors of the Massachusetts Medical Society, in 1858, based as it was upon the report of the committee appointed by the State Society at large, consisting of Drs. Foster, Hooper, Jacob Bigelow, John Ware, J. C. Dalton, Ebenezer Hunt, Charles Gordon and myself, drawn up and rendered during my necessary absence from this part of the country, and without my being in any way conferred with, I entered by letter to the Councillors my earnest protest. This protest, so far as can be judged by the published proceedings of the Councillors, seems never to have been acted upon.

I should have long since brought the matter before the profession at large, had I not been prevented by ill health. That cause no longer

* Criminal Abortion in America, p. 74.

exists, and after the lapse of eight years, during which the subject has never by me been lost sight of, I am but the more confirmed in the opinion that a grave error was committed by my colleagues. By the vote of the Councillors there was furnished additional ground for the third of the causes mentioned above, by which the profession become directly accountable for the increased frequency of the crime.

The resolutions adopted by the Councillors upon the occasion referred to may have been supposed by some to fully cover the required ground. They are, however, speciously framed—they in reality amount to nothing, begging the vital question, as they completely do, and, as one of the committee by whom they were offered, I again repudiate them.

These resolutions are as follows:

1. "*Resolved*, That the Fellows of the Massachusetts Medical Society regard with disapprobation and abhorrence all attempts to procure or promote abortion, except in cases where it may be necessary for the preservation of the mother's life.

2. "*Resolved*, That when any Fellow of this Society shall become cognizant of any attempt unlawfully to procure abortion, either by persons in the profession or out of it, it shall be the duty of such Fellow immediately to lodge information with some proper legal officer, to the end that such information may lead to the exposure and conviction of the offender."

It will be seen that exposure was here supposed tantamount to insuring conviction, where, under the laws as they exist, conviction has been proved impossible.

It were well did no other apparent sanction than such as this exist on the part of the profession. There are others. Not only is gestation still allowed in many instances to go on to the full time, when a succession of still births by the same patient has shown that the induction of labor a week or two prematurely might save the infant; not only is craniotomy still frequently resorted to where turning or the use of the long forceps might result in a living birth; not only is anæsthesia in child-bed still often neglected or refused, favorable though its employment would be to the life of the child and to that of its mother; not only is ergot extensively used to hasten labor unnecessarily, although its exhibition is undoubtedly in many instances attended with excessive danger to the fœtus; not only is a refusal to nurse, without due reason, on the part of the mother often permitted or advised by the medical attendant, although the breast of its own parent when in health is undoubtedly the best one on all accounts for her child, and far safer for its life than any artificial feeding; but "the criminal abuses likely to arise from the procurement

of justifiable abortion by medical men are so numerous, their own liability to be thought by the public criminally careless of fœtal life or sceptical concerning its existence, is so great, that the subject is worthy special consideration."

That the fœtus is *alive* from the commencement of pregnancy cannot be gainsaid. Questions of physiology have, it is true, arisen regarding the nature of this life—some physicians even asserting that the cardiac pulsations previous to birth are but an instance of the acknowledged irritability of muscular fibre under the stimulus of a certain excitation, in this case, of blood that has in one way or another been decarbonized, or whose carbonization has been but imperfectly effected; and there are many interested persons, abortionists, for instance, who would claim that to pronounce the unborn fœtus alive argues ignorance of the plainest physiological laws. I do not hesitate, however, to assume such imputation, certain as I am of the support of all impartial and competent observers.

The induction of labor prior to the full period of gestation may be justifiably resorted to by physicians for but one of two reasons, either to save the life of the mother or that of her child. In each case it must be absolutely and only to save a life.

Performed before the latter end of the sixth month, the chances are that the child, if born living, will die. Prior to this time, therefore the operation can only be justified by danger to the life of the mother, the child being almost necessarily destroyed. The induction of premature labor, properly so called, performed after the expiration of the period above mentioned, its propriety and necessity in certain cases, its impropriety in others, present points of great incidental importance to the main question we are now discussing; but at the present time I confine myself to abortion, before the seventh month, induced by medical men.

It is believed by the community that the operation is not unfrequently performed. I have already put upon record my belief to the contrary in the following emphatic language:

"It has been often alleged, and oftener supposed, that physicians in good standing not unfrequently, and without lawful justification, induce criminal abortion. This statement, whatever exceptional cases may exist, is wickedly false. The pledge against abortion, to the observance of which Hippocrates compelled his followers, by oath, has ever been considered binding, even more strongly of late centuries. The crime is recognized as such in almost every code of medical ethics; its known commission has always been followed by ignominious expulsion from medical fellowships and fraternity. If this direct penalty be at any time escaped,

it is only through lack of decisive proof—bare suspicion, even, of the crime insuring an actual sundering of all existing professional friendships and ties, a loss that subsequent proof of innocence could hardly restore. Such is the unanimous feeling of the profession; to its credit be it said, that with but a single exception, Jorg of Leipzic, and this to his eternal disgrace, its writers are all agreed, abstractly considering the subject, on the sanctity of fœtal life. The instances where physicians in good standing are guilty of the crime are of rare occurrence—the error that has prevailed on this point originating from the self-assumed titles of notorious quacks and knaves. But no condemnation can be too strong for the physician who has thus forgotten his honor—who has used to destroy life that sacred knowledge by which he was pledged to preserve it."

On the other hand, it is no uncommon thing for women of good position to assert to me that abortion has been induced for them by gentlemen of excellent standing in the profession, especially among the older men, and I am constantly conferred with by other physicians to whom similar charges have been made. Allowing, as I cheerfully do, that many, perhaps the majority, of such allegations must be false, still there is in a certain number of cases a foundation in truth. I do not believe that abortion is often induced by regular physicians, with evil intent; but I do believe that it is not infrequently accidentally occasioned by them, and too often intentionally under a sincere but mistaken idea of its necessity. In the former of these cases, of which quite a number of instances have now been brought to my attention, the suspicion of intentional assistance on the part of the physician is almost sure to be entertained by the patient, especially if she is anxious to escape child-bed, whether or not she has given the slightest intimation whatever of her possible pregnancy. In the latter of the cases supposed, if the attendant knowingly kills the child, whatever the supposed necessity, without having first held a consultation upon the point with another physician, he should be held amenable to the bar of professional opinion, if not to that of the law, for having directly encouraged the crime.

In another communication I will confirm my assertion that professional abortions, accidental, should be more carefully avoided, and intentional should more seldom be resorted to, and never upon a single, unaided opinion.—*New York Medical Journal.*

OBSTETRICAL SOCIETY OF LONDON.

A paper, by Dr. C. H. F. Routh, was read "On a New Mode of Treating Epithelial Cancer of the Cervix Uteri and its Cavity."

The author, after referring to the able papers of Mr. Moore on cancer, said that the use of bromine as a local agent was first suggested to him by his colleague, Dr Wynn Williams. Dr. Routh then related two cases admitted under his care at the Samaritan Hospital. In the first, the patient was thin, pale, and haggard, losing blood continually. There was a mass of fungoid epithelial growths, taking their origin from the os uteri, and about the size of an egg. The actual cautery was used to check the bleeding, and after the slough had come away a solution of bromine—five minims, to fifty of spirits of wine—was used. A piece of lint, the anterior surface of which was well saturated with the solution, was applied to the uterine diseased surface, and kept *in situ* by pledgets of lint. After forty-eight hours it was removed, and the part dressed at night with a poultice of lint dipped in warm water, and during the day warm douches were applied. In about a week a slough came away, and left a large healthy granulating surface. Tannin, with glycerine, was applied, and used daily. The patient also took internally the iodide of arsenic, with extract of conium. After a period of ten weeks she was fat, hearty, and well-coloured; but as she occasionally lost a drop of blood, Dr. Routh carefully examined the internal surface of the uterus, and found about a quarter of its lining membrane affected with epithelioma. She left the hospital for some weeks, and on being readmitted, a piece of wood, about the size of the uterine cavity, was prepared, and covered with cotton; the upper part was dipped in a saturated solution of carbonate of soda, the lower in the bromine solution, and it was passed up and left within the uterus. Two or three further applications of the bromine, with glycerine, were necessary, and the patient left the hospital with a moveable healthy uterus.

In the second case there was a large carcimatous mass, about the size of an orange, attached to the os, which appeared to be large cauliflower excrescences, breaking down readily and bleeding at the slightest touch. On January 20th the mass was removed by the wire écraseur, and a few days afterwards the spiritous solution of bromine was applied. She took internally the iodide of arsenic and conium, and was treated in the same manner as the first case. She left the hospital on April 2, with a moveable uterus covered with healthy mucous membrane, and looking herself fat and hearty.

The author remarked that he was quite aware that two cases afford an insufficient criterion as to the value of any remedy, and that time had not been allowed to prove that the cures were lasting. Notwithstanding these objections, he thought, at the same time, there were some considerations which made an early publication of these cases desi

The author concluded by drawing attention to the care necessary in mixing the bromine with the spirits, which should be done very gradually, to avoid an explosion. He hoped others would try the agent he now brought forward, and give the results of their experience. He believed it to be a potent and useful remedy, and likely to prove of service, if not in the cure absolutely, at least in the arrest of the progress of cancer.—*Medical Times and Gazette.*

Miscellaneous.

A USEFUL HINT.

In Vienna the use of sulphate of iron as a deodorizer has had a most beneficial result. According to the *Presse*, the rats have been so effectually destroyed by the use of green vitriol, that recently Professor Hyrtl was unable to procure a supply of that animal for experimental purposes. There is no better or cheaper substance known as a deodorizer, or, as some people call it, disinfectant; and if it results in the wholesale destruction of these pests, we would advise its use freely in our city drains.

POISONING BY THE EXTERNAL USE OF BELLADONNA.

Two cases of poisoning by the external use of belladonna are mentioned in the London Hospital reports; the first that of a nobleman, for whom a liniment of two ounces, containing two drachms of liquor belladonna, was prescribed. The symptoms exhibited were a rapid pulse, great central excitement, and a widely dilated pupil. The other a case of a servant girl, who, for painful breasts sought advice, when a chemist prescribed ʒ ss. of ext. belladonna in ℥ j. of water. The same symptoms were observed. Both cases rapidly recovered on stopping the application.

Canada Medical Journal.

MONTREAL, NOVEMBER, 1866.

REPORT OF THE MEDICAL SUPERINTENDENT OF THE PROVINCIAL LUNATIC ASYLUM, TORONTO.

We had intended before this referring to the able and important report of the Medical Superintendent of the Provincial Lunatic Asylum at Toronto, and we feel certain that no unbiassed reader can peruse this report without endorsing fully the views propounded by the talented author. We have, again and again, contributed our protest against the systematic neglect of these unfortunate patients; but it remained for Dr. Workman to point out what is the true solution of the difficulty. A man who is afflicted by insanity or any other malady becomes a charge on his friends if he has any, or on the community, if he has no relatives willing and able to succour him in his distress. In the case of the insane man prompt and active treatment by isolation and appropriate medication is the only hope he has of ultimate recovery. If left for a time without that care which is acknowledged to be his only chance, his disease becomes a settled madness.

Dr. Workman has pointed out this in connection with the system adopted in our country.

There are here in Canada seven asylums for the insane, five in Upper Canada, and two in the lower section of the Province. These seven asylums are full to repletion, the inmates being of that class who have little or no chance of deriving benefit from any treatment. These necessarily occupy the room in our asylums which should be reserved for cases of acute mania. The doctor proposes the establishment of secondary asylums for the residence of incurables. The primary asylums or insane hospitals being reserved for recent cases.

"*The great want seems to me to be the institution of a comprehensive and humane system of providing for the chronic and incurable.* This is now most inadequately attempted by their retention in our primary asylums, with the collateral aid, since 1856, of the three branch asylums. All are now full; and the demand for further accommodation, instead of decreasing, is constantly augmenting. Multiplication of branch asylums, such as those hitherto established, is by no means desirable; but even were the case otherwise, it is very doubtful if any government we may ever have in Canada, would feel disposed to augment the charge upon the pro-

vincial revenue for the support of the insane to the figure requisite; and if it should retain the purpose of continuing in this responsibility, it is a fact requiring no demonstration, that the fiscal concessions would always lag many years behind the actual requirements; and would hardly ever be made until the evil resulting from its procrastination had assumed a magnitude and intensity no longer to be ignored."

"If the provincial exchequer make provision for the primary treatment of insanity in curative hospitals, and afford to every case requiring asylum benefit privilege of residence for a definite period—say two years—it appears to me it would have done all that should be expected from it. After this period, the support of the unrecovered should be devolved on the respective municipalities; but the measure of support, and the mode of administering it, should not at all be left at the option of these corporations."

Here then is the remedy: if the government were to establish insane hospitals, two or three would be sufficient for the whole country, and after residence of the afflicted in these institutions for two years, without benefit, to transfer them to a secondary asylum, there to remain a charge on the municipality from whom they originally came. But as Dr. Workman very justly observes "the measures for support and mode of "administering it should not be left to the option of these corporations." A special tax should be levied, and the administration of the secondary institutions should be under the control of special inspectors. By the present system of affording relief, we are each year augmenting to a serious extent, the number of cases of incurables, many of whom would undoubtedly have been restored to the industrial population had prompt measures for their relief been adopted. Is it curative to place in a prison cell, an unfortunate person whose brain has been overwrought, who in the wildness of his paroxysm sees

"More devils than vast hell can hold?"

Can it, we say, afford him a chance of recovery by placing him in a cell of one of our gaols, there to be attended to by ignorant men, and there retained until a death-vacancy occurs in one of our asylums? What would be the death-rate of any of our hospitals, if an individual, to obtain admission there for any bodily disease, had to be sent to a prison for a certain probationary period, or until some unfortunate predecessor had bequeathed his bed by surrendering his life? Can there be anything more grossly barbarous than this system of treating disease. We are willing to admit that the Government have erred through ignorance; but now, since the publication of this most important document, the excuse of not knowing better cannot be offered.

The following case has been communicated to us by a confrère, and, as it is to the point, we give it:

A poor servant girl, of excellent character, was attacked with erysipelas of the scalp, and sent to the Montreal General Hospital. After a severe illness she recovered; but shortly after became violently maniacal—indeed so violent as to require restraint. Her bodily health was not much impaired, and the case was evidently one requiring special and careful treatment, in a proper asylum. Nothing could be worse for her than to send her to the gaol, where nothing approaching proper treatment could, in the nature of things, be expected; and where the poor girl might be associated with the obscene or violent lunatic or filthy idiot. What could be done? Application was made to one of the judges for a special order, which application, after some consideration, was refused; and the poor creature—helpless—unfriended—insane—sick—was sent to a place intended for the vilest characters. Even her short and accidental residence will perhaps be a source of life-long humiliation.

A little farther on in the report will be found views very generally entertained in regard to the causes of insanity. The most fruitful of which is that moral sin, self-abuse; or, in plainer language, the filthy practice of masturbation; learnt at school by most boys, and carried on in after life by many, to the sapping of the foundation of all that is pure, holy, healthful and intellectual. This portion of the report should be read attentively by moral reformers, and all others, who are desirous of banishing forever this pestilential habit. We cannot do better than conclude these remarks with one extract, as a species of guide to those who are not acquainted with the peculiar conditions of health, or characteristic features which persons resorting to such practices nearly always exhibit. Friends too often attribute attacks of mania to disappointed love or religious fervour. On this head the doctor remarks:

"The skilful physician who measures the feeble, paltry, accelerated, yet lazy pulse—who feels the clammy, cool, somewhat repulsive skin—who notes the pallid countenance, the waxy features, and frequently foul breath—who tries to gain one steady, confiding, open look from his patient, and whose questions in a certain suspected direction are met with hesitation, equivocation, or affected mortification, well knows how much truth there is in the charge against Love: and he will, in similar cases, acquit Religion."

We have been requested to call attention to the following note addressed to members of the medical profession in Canada. Dr. Marsden is well known to the profession as a gentleman of acute observation and

untiring research, and we feel convinced that the paper he is desirous of submitting to the American Medical Association at its next meeting will be a most important document. Valuable in containing the experience of the doctor himself, an experience extending over all the epidemics of cholera since its first appearance on this continent; and likewise valuable as giving (we trust) a host of evidence from medical observers in other parts of the Province. We hope that all who have reliable information will communicate it as fully as possible. The information thus gathered we may reasonably expect to see issue from the press in book form. The object is truth unbiased, and the profession owe it to the Doctor to fully sustain his praiseworthy desire in aid of setting at rest this vexed question of the portability and communicability of Asiatic cholera:—

To the Members of the Medical Profession on this Continent:

GENTLEMEN,—Having again been unanimously elected by the College of Physians and Surgeons of Lower Canada delegate to the Annual Session of the American Medical Association to be held in Cincinnati, Ohio, on the first Tuesday of May next, I beg to announce my intention to present a paper to the Association "*On the Infectious Character of Asiatic Cholera, its Portability and Communicability.*"

With a desire to render it as full and complete as possible, I shall feel greatly obliged to such members of the profession as may be pleased to furnish me with any facts sustaining these views, that may have come within their knowledge or under their observation during the recent or any former visitation of this pestilence, for which they will be duly credited.

Address, until the 1st of April next,

W. MARSDEN, M.D.,
Place D'Armes, Quebec, Canada East.

Dr. Kenneth Reid, whom our Montreal readers will recollect as a very distinguished student who graduated with high honours here in May, 1864, has just returned from Europe, whence he has brought with him credentials of his doings there in the shape of several diplomas. He seems to have devoted himself with unceasing attention to practical medicine and surgery. Diseases of the eye have been diligently studied under the Younger Desmars and others in Paris, and will probably be that branch of the healing art to which Mr. Reid will ultimately more especially devote himself. In the meantime, his services have been secured by the Health Department at Staten Island, N.Y. We must congratulate the quarantine authorities on their quick recognition of our able young *colaborateur's* abilities; while we, in Canada, shall watch his career with peculiar interest.