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CANADA LANCET.

WILLIAM EDWARD BOWMAN, M.D., EDITOR.

No. 2.

MONTREAL, APRIL 15, 1863.

VOL. 1.

ON LARGE DOSES OF DIGITALIS.

By W. E. BOWMAN, M.D.

It is now nearly eighty years since the adoption of digitalis as a standard remedy by the medical profession, and yet we may be said to be in our infancy with regard to its doses, its uses, the quantity that may be borne with impunity, and the peculiar times, states, or changes in the system, that preclude its safe employment.

In some diseases, we say, experience has taught us that it is unsafe to give over two or three grains of the powdered leaves, or 30 or 40 drops of the tincture; and that even these doses frequently repeated, produce alarming depression of the heart's action. But Dr. Holland, however, remarks that physicians are too liable to be influenced by this sudden slowness and irregularity of the pulse, that he never recollects of a case of any injurious effects arising from small doses of digitalis, and farther, that to this fear of continuing its employment may be attributed their occasional want of success, with this valuable agent. He says too, that in dropsy with dilatation, and irregular beating of the heart, foxglove proved extremely useful in his hands, in removing the one, and correcting the other; but he was not afraid to push the remedy, for he found that relaxation and feebleness of circulation, called especially for perseverance in its use, and that weak persons bear much larger doses than the strong.

Cases of dropsy are liable to die suddenly, no matter what medicine they are taking at the time. If it be digitalis, the patient is thought to have died by digitalis, but if any other remedy, the death is attributed to the disease alone.

Dr. Withering, as long ago as 1777, confesses the truth of this assertion; he directed a decoction of the fresh leaves in a case of ascites, and the woman died suddenly three days afterwards. On inquiry, he found the digitalis had not been given at all, owing to the difficulty of getting it from under the snow; had the woman been taking the remedy, he said he would undoubtedly have attributed her death to its employment.

But deaths from digitalis are extremely rare; a man fills a quart pitcher with foxglove leaves, pours over them a pint, or a pint and a half, of boiling water, and takes a teacupful of the infusion on going to bed, repeating the dose from the same pitcher, the following morning. All the first dose, and part of the last, is absorbed, and yet he does not die,—with a little brandy and ammonia, he recovers, without convulsions or coma.

A woman with dropsy, boils two handfuls of the leaves in a quart of water, and drinks two tea-cupfuls of the "tea." She also, vomits and recovers, stimulants again being given.

A man with asthma, hearing that tincture of foxglove is good for his complaint, cures himself by taking an ounce of it, goes to bed, sleeps for three hours and a half, awakens, is vomited and purged,

lies down to sleep again, and after three hours more, his heart beating but 36, stimulants are again resorted to, and he recovers.

A drunken man, thinking it will cure him, takes half a wine-glassful of tincture of digitalis, and not being satisfied, swallows the remainder shortly afterwards; it does not cause him the slightest inconvenience.

From time immemorial, the charmed women in the rural districts of Ireland, have been in the habit of giving enormous doses for the cure of epilepsy. They boil the juice of four ounces of the green foxglove with a pint of beer, and give the mixture in doses of a gill (equal to 1½ ounces of our tincture), every third day; and they are very successful with it.

But it is not the ignorant alone who employ large doses of this herb, for there have been medical men, ever since Dr. Withering's time, that have prescribed heroic doses of digitalis. The late Sir William Crampton, not only examined into the correctness of the account of the fairy women's treatment, but exhibited it himself in like manner in four cases, as long ago as 1828; and said that he cured three of them by it, but lacking the bravery of his country women, he always became alarmed at the severe depression caused by the first dose, and never dared to give a second to the same person.

Dr. Sharkey, of Cork, in the *Lancet* of 1831, after much experience, also acknowledges the correctness of these women's treatment, and gives the foxglove juice in the same way.

Dr. Corrigan, in 1845, also testifies to the correctness of the experience of the two physicians above mentioned, but says, he never gave it but once in such a manner, when, although successful, he found it to be followed by violent vomiting, cold sweats, and a feeble and irregular pulse; and these again by intense gastritis, with great sinking of the vital powers, and double vision; which continued for several days, and proved quite sufficient to deter him from again venturing on its administration in such a dose. The plan he adopted afterwards was to prescribe 12 grains of the powdered leaves, (equivalent to quarter of an ounce of the tincture), in infusion every night for months, augmenting the dose very carefully as the system became accustomed to its use; and has had great success with it in epilepsy.

Dr. Billing, 25 years ago, gave half-ounce, and ounce doses of the tincture of digitalis for the same disease, and found it very efficacious in warding off its attacks.

Dr. Copeland remarks, that early in the present century, large doses of the infusion of foxglove were given very indiscriminately in dropsies, and that patients were often reduced very low with it, but he speaks of no fatal cases.

Mr. King, a physician in Suffolk, Eng., had been in the habit for many years of prescribing this re-

medy in large doses, for the arrest of acute inflammation. His usual way was to bleed his patient freely, then give him from half an ounce to an ounce of the tincture, and repeat it in 24 hours if the pulse remained unsubdued, or its regularity unaffected. After long experience, he pronounces it not only a safe, but a very successful remedy, and declares that any inflammation that has not gone as far as disorganization, will surely yield to it.

Dr. Pareira himself, through Dr. King's representations, gave half an ounce of the tincture several times, in cases of fever and pneumonia, and did not find it to produce the poisonous effects that he more than half expected.

Dr. Withering, in 1780, prescribed 15 grain doses of the dried leaves (equal to two and a half drachms of the tincture) every two hours, in the case of a young lady that had been suffering for a month from an attack of puerpural mania, with dropsical swellings of the legs; and both, he says, disappeared together in a short time.

The same physician, the year before, prescribed foxglove with wonderful success in doses of 34 grains of the dried leaves in decoction (equal to nearly six drachms of the tincture) to a man in furious delirium tremens, repeating the dose every three hours, until it made him sick at the stomach, which it did by the fourth draught; then the remedy being stopped, the man remained sick but about four days, during which time he made a great deal of urine, and gradually became more rational; on the fifth day his appetite returned, and sickness ceased.

A man several days ill with delirium tremens requires a repetition of his mixture of prepared opium, but the patient with heart disease is to have her medicine as well; the two bottles lie side by side, and the delirious man gets an ounce of tincture of digitalis. Hours elapse, the physician, horror struck, discovers the mistake, he never went to see a patient so quickly before, nor never gave a dose so successfully; for the man had recovered, and the world profited by the accident.

To the late Mr. Jones, of Jersey, Eng., we are indebted for drawing the attention of the medical profession, during the last few years, to the treatment of delirium tremens by means of heroic doses of tincture of digitalis. He directs half an ounce at first, and half an ounce in four hours, which if unsuccessful in causing sleep, is again repeated in six hours; making an ounce and a half in ten hours. He says that in doses of one or two drachms it has proved quite useless in his hands.

Now that the attention of physicians is fairly awakened. Dr. Ballard of Islington, Dr. A. W. Williams of Liverpool, Dr. Peacock of St. Thomas' Hospital, and a host of others come boldly forward, and give their testimony in favour of these enormous doses of digitalis; and no fatal cases have been yet recorded from them.

But rarely as it may occur, people do die from the effects of large doses of digitalis. Beck, in his medical jurisprudence, gives an account of a death from this poison, by convulsions and coma, produced by a strong decoction of the leaves; it was in a young lad, and a quack was tried for having given it.

Dr. Taylor mentions a case also of a young man, who took a strong decoction by mistake; he also died in like manner.

A case where the infusion of the root proved fatal is reported in the *Lancet* of 1849.

Mr. Forget, a physician of Strasbourg, tells like-

wise of a case of phthisis, where he prescribed 15 drops of the tincture daily; increasing it carefully, until the woman was taking 100 drops in a day, when vomiting and convulsions set in, and she expired.

Professor Guy remarks that the quantity of digitalis required to destroy life, has never been accurately ascertained.

There are very many vague assertions in authors, of sudden deaths of patients, whilst under the influence of digitalis, but every one of them decline mentioning any individual cases; this certainly argues a great want of candour in the profession. But although these uncertain statements cannot be implicitly relied upon, there is little doubt but that there is much truth in them, for it must be allowed that it requires much moral courage in a medical man, striving for professional reputation, to come forward and say that he has killed, or even hastened the death of one of his patients, by means of this remedy.

It seems that of the few deaths on record, from having taken large doses of digitalis, all had convulsions, and that those that recovered had not experienced them. If this then be allowed to be the cause of the fatal result, what has produced them in the one case, and not in the other? Certainly not the quantity taken, nor the time of its remaining unrejected in the stomach.

It is an old aphorism, handed down from Hippocrates, and repeated by thousands of physicians since his time, that convulsions arise either from repletion or depletion. That it is not the former is self-evident. Is it not rather that the heart does not possess sufficient power to prevent, by its propulsive action, the coagulation of the blood in the sinuses of the brain? And that the very effort to overcome the obstruction is sufficient to account for the slight congestion found after death in these cases. But, apart from this, are there not other pathological changes of which we are at present ignorant, and that the post mortem examinations have failed to detect?

I am aware that Dr. Fuller considers hypertrophy of the heart, the change to be guarded against, but is he prepared to say that without this hypertrophy we may safely push the doses of digitalis? And would the spasm mentioned by him, cause the convulsions produced by the action of the remedy? And has post mortem rigidity, which sets in late in such cases, nothing to do with this alleged spasm? And finally, can the effect of foxglove on animals be applied to man?

Verily we have much yet to learn of this remedy, but with so many master minds as are at present at work, it cannot be long before our knowledge and experience on this subject shall have materially increased.

Few, comparatively, die with delirium tremens, and the question naturally arises in the present unsettled state of opinion concerning the virtues of digitalis, whether we are justified in putting our patient's life in jeopardy, by employing such large doses as now recommended. Until we have the report of some fatal case, I say decidedly, yes. And let any physician like myself, stand at the bedside of a patient suffering with the "horrors," and feel that in a few hours, at most, he can end all these frightful dreams, and his hand too, will be willing to pour out the remedy, and perhaps like mine, falter at the first measuring, but to steady wonderfully when it is again needed. There certainly was not a drop over the half ounce in the

glass that I handed my patient to drink off, before sitting down at his bedside, with feelings not to be envied, to take the following notes. This was a year ago, when the foregoing treatment had not been as highly lauded as at present. The case was that of an old man of 50. I copy my notes.

This is his third debauch, he says, but he must from his appearance have been a hard drinker for many years. He has not slept for several nights. I ordered a purgative yesterday, and a dose of morphine at bed-time, which did not cause sleep. This morning his tongue is still coated yellow, and he passes but little urine, which he voids with difficulty. He is not delirious, and says he is sure he could have slept last night if it had not been for the cats tormenting him; has had no visions to-day. He can lay comparatively quiet, except when speaking or moving, at which time he becomes greatly agitated. When seemingly asleep, his eyelids twitch constantly. After every precaution to avoid having his mind interfere with the action of his heart, I gave him the digitalis, his pulse at the time being 80 lying and 100 sitting. 6 minutes after dose; his face begins to flush, and he says he experiences a "vividness" over his head, and that he feels rested, and his bowels are warmed by the medicine, and "moving about."

8 min. after the dose, pulse down to 56; does not tremble so much on speaking, and seems calmer. 13 m. after dose, pulse 64; feels a "calm tranquility." 20 m. after dose, pulse 62; twitching of lids, which has been quite regular hitherto, is getting irregular and inconstant, he is very quiet but not at all sleepy.

Half an hour after dose: the quarter minutes of the pulse begin to change for the first time, each quarter varying from 17 to 20, although the beats are equidistant; still trembles on speaking. A mild perspiration is breaking out all over him.

One hour and three-quarters after dose, pulse 83, firm and thrilling when pressed, hitherto it had been soft. Has not slept, but has been reading, a thing he was quite unable to do for several days past; the quarter minutes of pulse are 26, 23, 25, 26, 24 consecutively, taken whilst sitting up in bed. The agitation on speaking and moving has nearly left him, it is greatest in his knees now. I did not repeat the remedy. He passed a good quantity of urine, ate his food well, and had pleasant dreams, although he did not sleep much during the following night; pulse the next morning 80, and feebler; nervousness nearly disappeared. I concluded his treatment on the expectant plan.

My last case.

Tuesday, March 3, 1863.—I was called to a strong man of 45, who had been drinking nine days. Liquor affects him very easily. He has been delirious for four days, but not very bad, till this morning. His spasms are rigid, and his visions frightful, has not known any one since 5 o'clock this morning, and has tried to jump out of the window, pulse 80 and full.

At 10 o'clock a.m. I gave him $\frac{1}{2}$ oz. tr. digitalis of the best quality.

2 minutes after dose, pulse still 80. 4 m. after dose, pulse down to 68 and a little harder. 8 m. after dose, pulse 64, with a peculiar wiry feel. 12 m. after dose, face suffused; I now for the first time notice that the left pupil is more contracted than the right. He has had four spasms since he took the remedy.

15 minutes after dose, quarter minutes now begin to differ, they are consecutively 16, 20, 18, 18,

but beats equidistant; has just had a severe spasm, at its climax I noticed the pupils dilated for an instant.

20 m. after dose, pulse 72; 25 m., 72. 40 m. after dose, still 72 but softer; spasms continue, but are slightly diminished in intensity. One hour after the dose, pulse 72.

About 12 o'clock a.m. he craved some tobacco, which the attendant gave him (he is a chewer of the weed). After this he became quite quiet and getting rational, for the first time to-day.

Half-past 1 o'clock, p. m., pulse 72, pupils still unequal. The spasms and visions having returned as bad as before.

I gave him the second $\frac{1}{2}$ oz. tincture digitalis being 3 $\frac{1}{2}$ hours after the first dose. 3 minutes after dose, the pulse up to 80. 6 m. after dose, pulse still 80 but wiry. 10 m. after dose, pulse 80 and regular, but harder, quarter minutes are very even; no sign of sleep, and no fit since he took last dose; he lies quiet with his eyes open.

He again begs very hard for tobacco, which I give him; his hand trembles but little, and he is getting sensible very fast; passed about a pint of urine.

20 m. after 2nd dose, pulse 80 still, and even, but not quite so strong; he says my medicine eases the nerves "mighty quick."

Half an hour after 2nd dose, pulse 80 and fuller; he is very tranquil and has had no spasms since 2nd dose; he is quite sensible in every way, but the left pupil still remains contracted more than the right, both are dilatable.

Half past 4, p. m., pulse 80. Has had three spasms since I left, one of which the man said was very severe, he however talks quite lucidly, and remembers things; pupils are more equalized. I gave 3rd dose of $\frac{1}{2}$ oz. tr. digitalis, 3 hours after 2nd dose.

8 m. after 3rd dose, pulse beating irregularly for the first time, the throbs being some short, and some long; the quarter minutes also vary, being 18, 20, 18, 20, in the minute. He again longs for tobacco. 15 m. after 3rd dose, he is smoking quietly sitting on his bed.

25 m. after 3rd dose, pulse 80, regular and fuller; quiet, rational, and hungry; he eat over a pint of porridge with great relish, and I left him until half past 8, p. m., when I found that the spasms had returned, but not so severely; his skin is dry, and pulse 80; he eat heartily during my absence. I gave him the 4th dose of $\frac{1}{2}$ oz. tinct. digitalis, 4 hours after 3rd dose, and remained with him for an hour.

A short time after taking it, he again desired tobacco, but wishing to withhold it this time, I refused him; he however gained it by stratagem, and the attendant took it away by force, after struggling the pulse is weak, and up to 92 sitting; otherwise his pulse remained firm, about 80. The sweat is pouring from his forehead.

Quarter to 11, p. m.—Spasms had returned, and one was quite bad. Pulse 80; being determined to bring down his pulse. I gave him the 5th dose of $\frac{1}{2}$ oz. tinct. digitalis, 2 $\frac{1}{2}$ hours after 4th dose.

5 m. after 5th dose, pulse fell to 48, and became irregular. 10 m. after dose 52, and getting fuller and more regular.

15 m. after 5th dose, called for a cracker, is quite rational, and sits up to eat it. Passed urine.

25 m. after 5th dose, pulse 54; has vomited the cracker.

SECOND DAY.—Half-past 9, a.m. Pulse 48 and weak; has passed a bad night, sleeping in short

snatches, and waking with bad visions; he has had no return of spasms, and has not been boisterous, has been very hungry and thirsty all night, but has vomited every thing immediately, and without effort as soon as swallowed. Directed 1 oz. wine every half hour, and 20 drops chlorodyne every hour. 1 p.m. p. 48 and weak still; vomiting as before, after eating; give brandy punch, and increase chlorodyne to 30 drops. 6 p.m. pulse 76, but feeble, vomiting as before; gave chloroform and camphor mixture. 8 p.m. p. 72 and stronger, has had a good nap this afternoon, but vomiting has come on; gave 2½ m. creosote.

THIRD DAY.—½ to 8 a.m. pulse 36 to 48, and very irregular, has a slight external squint for the first time, gave ar. sp. amm. ʒi every hour. 11 a.m. p. 48, irregular but strong; continue ammonia, he wandered a little last night. ½ p. 2 p.m. pulse 48, and irregular but firmer; feverish; vomited but once since ten o'clock; squint continues; stop ammonia. 7 p.m. p. 56 and more irregular than at any time before, 3 or 4 quick beats followed by 3 or 4 very slow ones; skin hot and dry; had a healthy stool; external squint increased; gave ʒi gr. mur. strychnine. ¼ to 9 p.m. pulse 17, 16, 15, 16, to the quarter minute, = 64, not so irregular as when last seen, and, much stronger; skin still feverish; squint more divergent; quite rational all day; says he feels no pain anywhere, but is merely languid. 11 p.m. pulse 48 to 50 and irregular, but decidedly increased in volume; skin still feverish; has not vomited since; asked for some sour drink; gave the acetic acid I had in my pocket case; continued strychnine to day; has not vomited since 9 o'clock; squint slightly on the increase; eyes natural every other way.

FOURTH DAY.—Did not rest very well last night. Pulse in the morning 52; at noon 48; at night 42, and beating regularly; squint continues; has a shadow before his eyes; kept on with the strychnine three times to day; sleeps better, and is gaining strength.

FIFTH DAY.—Morning p. 44, and more regular; still squints; has had muscæ volitantes, and flashes of light, but not very bright.

SIXTH DAY.—Morning p. 64.

SEVENTH DAY.—P. 44 in the morning and 62 at night.

EIGHTH DAY.—Pulse 80; eyes right; well, but a little weak.

Thus it will be seen that I gave my patient 2½ fluid ounces of the tincture of digitalis in 11½ hours. The tincture was made by myself, according to the P. L. (4 Troy ounces of the dry leaves to 40 fl. oz. of diluted alcohol). The dried herb was from the Shakers, and very fresh and fine. The case was a very severe one, but it was unaccompanied by any preter-natural heat of the head. As it may be seen, the first dose lowered the pulse permanently 8 beats, but it was again raised by the second; and the 2nd, 3rd and 4th doses had no effect on the number of beats, but rendered them irregular at times. The 5th dose, however, brought down the pulse at once to 48, at which it remained most of the time for several days, producing no ill effects whatever, and merely rendering the patient languid.

The number of Medical men in the City of Montreal, is seventy-six, not including the twenty army surgeons. In Toronto sixty-three; in Ottawa City, twenty, and in Kingston, nineteen.

Canada Lancet.

MONTREAL, APRIL 15, 1863.

A decision of great importance to the medical profession, and one that cannot fail to have an influence with our judges here, was decided in Philadelphia, last February, viz: how far are physicians liable for accidents occurring during, or caused by, the administration of chloroform? It was given in the charge of Judge Hare, in the district court on the prosecution of Dr. Winslow, by a car-driver, for partial paralysis, caused as he affirmed, by the lengthened administration of this anæsthetic.

Judge Hare held that if a medical practitioner resorts to the acknowledged proper sources of information, if he sits at the feet of masters of high reputation, and does as they have taught him, he has done his duty, and should not be answerable for the evils which may result from errors in the instruction which he has received. And farther, he who acts according to the best known authority, is a skilful practitioner, although that authority should lead him in some respects wrong. This charge is reported more fully in the Dental Cosmos, for March, to which we are indebted for the above extract.

The history of the Montreal General Hospital would have been inserted in the present number had there not been unexpected difficulties thrown in our way to the examination of the records of this public institution by its present secretary, who we regret to add is a medical man. We hope however that this will be obviated by a future number.

NEW YORK OPHTHALMIC SCHOOL.—We are indebted to the kindness of Dr. Mark Stevenson, senior surgeon and lecturer, for the annual report of this celebrated school. In connection with the New York Ophthalmic Hospital, after an existence of over ten years, under the guidance of such able managers and accomplished surgeons, it has deservedly won its present high position on this continent. It is therefore not to be wondered at, that so many of our Canadian medical men and students have availed themselves of its admirable clinical lectures, to advance their knowledge of this, one of the most difficult branches of our profession.

We have just received an interesting paper from the Botanical Society of Canada, with an account of its garden, which we regret was too late for insertion in this number.

RECORD OF THE SURGERY OF THE BATTLES NEAR VICKSBURG.—Professor Andrews, of Lind University, Chicago, has our thanks for his able pamphlet on the surgery of the Vicksburg Battles of last December. Time has not yet permitted us to devote the attention to it that it requires.

QUEEN'S COLLEGE, KINGSTON. On the 26 ult. the ceremony of granting degrees to 23 medical students took place at this University. As usual the beauty

and talent of the city were fully represented, and Dr. Dickson after a few happy remarks, stated, that of the 24 students entitled to degrees 8 had laid claim to honours, and from the difficulty of deciding between them, it had been resolved to give the whole honorary certificates.

After the laureation and subsequent congratulations, Very Rev. Principal Leitch proceeded in an eloquent and warm hearted manner, to address the graduates. In the course of his remarks, he said that few medical schools were so favourably situated as theirs. The provincial penitentiary affording unusual facilities, and the Rockwood Lunatic Asylum, with the lectures of its courteous and accomplished Governor, was one of no ordinary advantage to students; continuing, he acknowledged with gratitude the boon conferred on the College by the addition of a new wing by John Watkins, Esq. This year it has been deemed proper to institute four fellowships one of which is of Medicine, and there was a fair prospect of their being endowed. He said farther, that nothing had yet been done for the purpose of protecting the profession from the licensing of incompetent practitioners. Each school had its own standard, and the rivalry that existed, tended rather to produce quantity than quality. It was a hard thing, he said, for an institution to attempt to elevate the standard when the same practical advantages were offered by others with a lower one. Some body similar to the Medical Council of England, he thought, was imperatively required. This body did not license medical practitioners, it only licensed the schools entitled to license practitioners; and it did not therefore recognise the diplomas of schools which did not give an adequate curriculum. Such a body, impartially constituted, he remarked, would be of incalculable benefit to the medical profession of Canada.

And farther, that it would not be an unreasonable concession, were the medical graduates of Canadian Universities entitled to registration in England, and the consequent right to practice there, on these Universities adjusting their curriculum to the requirements of the Medical Council. This would require an Imperial Act of Parliament, and little hope of this could at present be entertained. The practical disadvantage in the case of graduates of Queen's College, was however not of a serious character, as they had only to present their diplomas at the Royal College of Surgeons, London, and undergo an examination not more severe than those they had already passed, to secure the right to practice in England, and hold any situation in the public service.

The following are the names of the graduates, who received the degree of Doctor of Medicine, viz. :—

Archibald K. Aylsworth, Newburgh; James Becket, Godstich; John L. Bray, Strathroy; C. A. Irwin, Toronto; J. T. Ingersoll, Frederickburgh; J. W. Shrirey, Louisville, Kentucky; T. B. Howells, Kingston; R. Kincaid, Peterborough; J. McCammon, Kingston; E. G. Ferguson, Pittsburgh; R. E. Ferguson, Pembroke; W. F. Coleman, Lynn; J. Shannonhouse, Kingston; W. D. Howell, Kingston; T. F. McLean, Perth; T. H. Ross, Bath; J. B. Reitan, Kingston; J. R. Smith, Kingston; T. Sullivan, Kingston; J. A. Wilson, Kingston; H. F. Yeomans, B. A. Waterloo; A. Moore, Shannonville; A. S. Oliver, Kingston.

Mr. Comer passed his examination likewise but not being of age did not obtain his degree.

The eight who received honorary certificates are as follows:—Drs. Aylsworth, Bray, Coleman, R. B. Ferguson, Irwin, Kincaid, McCammon, and McLean.

VICTORIA COLLEGE, TORONTO.—We have been favoured with a copy of the examination papers of the medical department of this University, and find them excellent. We are also pleased to learn that this department holds regular summer sessions every year, thereby much advancing the studies of their students. We subjoin a classified list of the successful candidates this session.

1. Fulton, *Gold Medal*; 2. Phelps, *Silver Medal*; 3. Jackson; 4. Law; 5. Spencer; 6. McKerracher; 7. Knowlly; 8. Chamberlain; 9. May; 10. Sinclair; 11. Burkholder; 12. McInnis; 13. T. Sch. ooly, M. D., of Buffalo; 14. Bryning; 15. Alway; 16. Forbes; 17. Smith; 18. Lawrence. The last mentioned gentleman having been absent during the oral examination, has yet to be passed.

Reviews.

THE HISTORY OF MEDICINE.—Comprising a narrative of its progress from the earliest ages to the present time, and of the delusions incidental to its advance from empiricism to the dignity of a science. By Edward Meryon, M.D., F.G.S., Fellow of the Royal College of Physicians of England, &c., Vol. 1. LONGMAN & Co., London. 8vo, pp. 483.

One of the most readable and interesting books, that has been contributed to the literature of our profession. Dr. Meryon traces the progress of the Healing Art, from the earliest ages down through the various sects and schools, to the Medicine and Surgery of the 16th century. The work is written in a fine philosophic spirit, and in a charming and pleasant style. It is impossible to rise from its perusal without feeling that the author has devoted much time and attention to the elucidation of the various systems to which his work refers, and that he is singularly happy in the historical treatment of his subjects. When Dr. Meryon has completed his work it will doubtless be reprinted in a cheaper form on this continent. Thirty years ago, Dr. Meryon gained the Gold Medal of the University of London, amidst the applause and approval of his fellow students. And the earnest devotion of his student life, has been well sustained in his subsequent career as a practitioner and a teacher. If the remaining parts of the History of Medicine bear out the promise of the volume before us, it will prove for all future ages in Medicine, what Macauley's work has proved in General English History, a complete and exhausting *resumé* of all that is known of the subjects upon which it treats, conveyed in a form which makes it as pleasant reading as any of the light and sparkling literature, for which our own age has been rendered famous, in the pages of Thackeray, Dickens, De-la, Anthony Trollope, Wilkie Collins, and a host of living writers. Strange as the assertion may seem in regard to a work on the abstruse subject of Medicine, we have as much difficulty in closing the book when we once sit down to its perusal, as we have in rising from the lucubrations of the popular writers, whom we have quoted, before the plot of a tale is told. Or as we had in concluding the 4th volume of Macauley's History after we knew that the grave had closed upon its gifted author. So much for charm of style, and an earnest, frank and philosophic spirit in the treatment of a subject. Our young aspirants for literary fame in the profession, could not do better than to take Dr. Meryon's History as the model upon which they should form their own compositions. J. P. L.

CHANCRES.

A synopsis of the results of all recent investigations on the subject. From Ennatrat and other authors, by W. E. Boorman, M.D.

(Chancres are contagious ulcers, which being most frequently transmitted in sexual intercourse, chiefly affect the genital organs.

Out of over 800 cases of chancres of all kinds at the Hôpital du Midi in 1856, 600 were on the glans and prepuce, 75 on the skin of the penis, 40 involved the meatus, 20 were inside the urethra, 11 on the scrotum, 8 on the anus, 12 on the lips, 3 on the tongue, 1 on and 1 in the nose, 2 on the fingers, and 1 on the leg.

There are but two varieties of these ulcers, the chancroid, and the infecting or true syphilitic chancre.

Among persons free from syphilitic taint, each of the two species is transmitted in its kind, the simple chancre always causing a simple chancre, and the infecting chancre producing an infecting chancre, the latter being invariably followed by constitutional symptoms.

On contagion, the whole of an abraded surface becomes a chancre; these sores therefore differ in shape, and like other ulcers that are exposed to irritation from friction, stagnation and concretion of matter, &c.; they likewise differ in aspect.

CHANCROID, known also as "simple chancre," "soft chancre," "non-infecting chancre," and "contagious ulcer," is strictly a local disease; it never affects the system, gets well in time even without treatment, and leaves no bad after effects. To produce it, requires, the contact of matter from a like ulcer or from a suppurating bubo poisoned by this matter, with an abraded surface.

The chancroid is not preceded by a period of incubation like syphilitic chancre, but the ulcerative process commences immediately on the implantation of the virus, and is sufficiently advanced to attract the notice of the patient in from 2 to 8 days after coition, 36 to 48 hours being the average time.

The late period at which a few soft chancres are observed, is rather to be ascribed to the contagious matter having remained for some time upon the surface before it occasioned sufficient irritation and rubbing to cause its absorption, than that it has lain dormant.

The virus of simple chancre lies alone in the pus globules, if they be removed from the secretion, it becomes innocuous.

A person making application a day or two after coition, with one or two raw surfaces on the penis, it is frequently impossible to diagnose if it be chancre or no, and may often be necessary to wait a few days, directing him to keep the parts protected with wet lint and oiled silk, when, if abrasions, they will heal rapidly.

A pustule is always observed after successful inoculation of the chancroid, when the infected point is protected from abrasion; if left unbroken, it is soon covered by a dark scab, under which the pus burrows and extends, if ruptured, the following sore is found beneath it.

Soft chancre is an excavated ulcer, perforating the whole thickness of the skin or mucous membrane. Its edges are abrupt and well defined, as if cut with a punch, and do not adhere closely to the subjacent tissues. Its surface is uneven, and covered with a grayish matter. It is surrounded by an areola, which varies in width and depth of colour with the degree of attendant inflammation.

Its secretion is copious and purulent, and is inoculable at any time of its duration up to its point of cicatrization, and never fails to produce a chancroid like itself, on any part or person, a previous attack affording no immunity from it. It is generally multiple from the first, or soon becomes so from contact of the matter with surrounding parts.

It is much more contagious and frequent than syphilitic chancre. M. Puche speaking of the Hôpital du Midi in Paris, states that out of ten thousand cases that had been under treatment in that institution during ten years, 8015 were chancroid.

There is no induration at its base, whence its name, the parts beneath being always as soft as the surrounding textures, unless when irritated by caustic applications, or simple inflammation; in which case the engorgement is not circumscribed, but shades off into the surrounding tissues, and of temporary duration. Sometimes, however, this induration so closely resembles that of syphilitic chancre, as to compel us to await its subsidence, or seek elsewhere for our diagnosis.

The non-infecting chancre is very persistent, and unless destroyed by caustic, will generally last for weeks or months, however skilfully it may be treated otherwise.

Its favourite seat is on the prepuce and glans, it also frequently involves the meatus.

Chancrous virus retains its power of contagion for a great length of time, and may be inoculated from almost any agent, as the fingers, towels, household utensils, pipes, tumblers, pencils, bank-notes, &c., &c. Sperino relates a case, where, after seven months laying on the point of a lancet, the dried matter was inoculated with success.

One person may be the medium of conveying the poison to another, during coition, without being themselves affected by it.

The matter of simple chancre is not modified or changed by passing through a person affected with syphilis.

In persons subject to attacks of herpetic eruptions, these may, from the excitement of coition and a deranged state of the digestive organs, become developed on the head of the penis; in which case they arrange themselves as usual, in a circular group, and may be known from chancres by their regularity, by the vesicles unbroken, the impossibility of inoculating their secretion, and by their disappearance in a few days.

Important Fallacy.—In some very rare cases, persons having once had syphilitic chancre, may become a second time affected with the same virus, when, contrary to the general rule, it produces a sore with a soft base, unattended by inflammation of any of the lymphatic glands; but which will propagate the unchanged infecting ulcer with indurated base, in a person free from syphilitic taint. The only test in these cases is the inoculation of the matter on the body of the person bearing it, if chancroid it will produce a soft chancre.

Again, soft chancre virus may be inoculated at the spot of induration left after an infecting ulcer, and thus seem to be syphilitic, when really but a chancroid; this also must be proved by inoculation.

CHANCROIDAL BUBO is an inflammation of the glands of the groin. It may be either sympathetic or virulent. Any irritation of the genital organs may produce the former, and suppuration does not necessarily ensue on this simple form, nor would its matter be contagious. The virulent or chancroidal bubo, however, arises from the absorption of virus from a soft chancre in its vicinity, which being conveyed

along the lymphatics to a ganglion is there arrested, invariably causing inflammation and suppuration. The virulent pus is at first confined to the interior of the ganglion, and does not communicate with the abscess which often forms in the surrounding cellular tissue. In this case the pus which issues when the integument alone is divided by the knife, is innocuous, but if the incision be made to include the ganglion, the matter will be found contagious. The lymphatics which convey the pus from the chancroid to the ganglion, generally escape, but in some instances inoculation takes place, and virulent inflammation is set up.

It is very rare for more than a single gland to become imbued with virus from a soft chancre, except when the ulcer occurs in the median line, as on the frænum or dorsum of the penis, when a ganglion in each groin may become affected. If the irritation be very great, sympathetic buboes may form around the chancroidal, and may even suppurate, their matter, however, would be innocuous.

On an average not more than half the cases of simple chancre ever have bubo. M. Rollet, of Lyons, states that in 140 patients; 83 had buboes, of which 60 were virulent, all of which latter broke and became contagious.

INFECTING CHANCRE.—Known also as "true," "hard," "indurated," "constitutional," "syphilitic," and "Hunterian" chancre.

It differs from chancroid in this, that it is our first index that the system has been poisoned by syphilis.

It becomes the more serious when we bear in mind the all but universal truth, that this constitutional disease leaves its impress upon the system for life, in the same manner as vaccine virus does; that no other affection so powerfully modifies the constitution ever afterwards, or exercises so great an influence on posterity; and that all attempts to eradicate the diathesis by medication would probably be as fruitless in one case as the other; although we may hope by occasional medication to prevent any activity of the latent poison during the remainder of life.

Like the vaccine virus also, its inoculation may be said to be instantaneous, therefore no cauterization however early, can possibly affect the after symptoms.

The secretion of a hard chancre is not inoculable upon the individual bearing it, nor upon any person whose system is already under the influence of syphilis.

Like chancroid, syphilitic virus requires an abraded surface to become contagious.

Indurated chancre is of shorter duration than chancroid, and its secretion, even when purulent, is much less copious.

Infesting chancre has no exclusive form, in a great majority of cases it is merely a superficial erosion, situated within the prepuce, where it presents a surface as smooth as polished marble, having little or no depression, and being at times slightly elevated above the surrounding tissues. It is of a red or grayish colour, and its secretion is a clear serum, free from pus globules, unless the sore has been irritated. This serum may often be seen issuing from minute pores, after the previous moisture has been wiped away. It has no areola, and heals without a cicatrix. Resembling as it does a mere abrasion, it is liable to be overlooked, especially if at a distance from the genitals, and it can only be known from the superficial abrasions of balanitis by

its induration and persistence, and from the ganglia of the groin being enlarged.

Bassereau found that out of 170 cases of true chancre that were followed by syphilitic erythema, (one of the most frequent eruptions of syphilis,) 146 had no other than superficial erosions, and but 23 went the depth of the skin, 14 of the latter being phagedenic; his were the milder cases of the disease, the more severe would have shown a much larger proportion of excavated ulcers.

When situated on the external integument, as the skin of the penis, where it is exposed to the air, this chancre becomes covered with scabs, which give it the appearance of a pustule of ecthyma or some scaly eruption. Ulcers so situated are generally syphilitic, and leave after them a peculiar brown stain, which eventually fades into a white; this discoloration is never seen after chancroid.

Want of cleanliness, or the application of irritants, likewise modifies the character of this syphilitic sore, causing its secretion to become purulent and its surface to resemble that of the chancroid, but its normal appearance may be restored in a few days by the application of water dressing.

Between the chancroid erosion and the indurated excavated ulcer, with its hard raised edges, and adherent gray slough, known as the true Hunterian chancre, there exists many gradations, owing their existence to peculiar states of the constitution, susceptibility of the infected person, and venom of the virus imbibed.

A pustular form of infecting chancre is very rare, as the papule first developed never fills, but takes on superficial ulceration.

Syphilitic chancre is generally solitary. If multiple at all, it is so as the immediate effect of contagion, several rents or abrasions being inoculated together in the sexual act. If solitary at first, it continues, solitary, for successive chancres never spring up, as in the case of chancroid, owing to the fact that the virus ceases to act on a system already infected.

It has been stated above, that in rare cases a syphilitic ulcer may be contracted a second time, when it resembles soft chancre; it must be recollected therefore, that a chancre with a soft base, and no induration of the neighbouring lymphatic ganglia, in a person having syphilis, will, when communicated to a person free from syphilitic taint, give rise to a soft or hard chancre, according to the nature of the virus occasioning it.

Some persons are so extremely difficult to inoculate with infecting chancre, that they do not become affected, even after the virus has been placed beneath the skin. Such people may, and do, carry the poison from one to another, as known occasionally in chancroid, without becoming themselves affected.

Induration is now justly regarded as the most prominent and characteristic feature of the constitutional chancre, when seated upon a person previously unaffected by it. It is a peculiar hardness of the tissues around and beneath the sore, formed without pain or inflammatory action, so silently, so insidiously, that the patient is often ignorant of its presence, or discovers it only by accident. It is firm, hard, and resistant, resembling cartilage beneath the skin, quite moveable, and whose boundary is well defined. It is often aptly described by the patient, as a little hard lump the size of a split pea, an almond, &c.

The boundaries of inflammation, on the contrary, cannot be limited with nicety, for it shades off

into the surrounding tissues, as may be readily understood, by pinching up a boil or pimple between the fingers.

If syphilitic induration and inflammation exist together, and obscure the diagnosis, the latter by subsiding in a short time, will leave the hardness easily to be distinguished.

(To be continued.)

To Correspondents.

Burnt Sponge.—Tear half a pound of clean coarse sponge into small pieces, put them into a length of new stove pipe, fastening a stopper to each end with wire; then put it into a stove on a wood fire, and turn it occasionally with the tongs; when the gas begins to burn very briskly around the closed ends, remove it, and rub the burnt sponge into powder in a mortar. If kept burning too long, the iodine and bromine will be driven off, and the remedy become worthless.

Hypophosphites.—To prevent the heat from exceeding 220° F., put the can over a small tin dish of hot water, which must completely be covered by the bottom of the larger vessel. This heat will be found quite sufficient for the purpose. The supply of water must be kept up as it evaporates.

Dr. Grant's Formula for the Tinct Boleti Laricis Canadensis.—Bolet lar., ʒ x; alcohol, O.ij; aqua, O.ij; digest for 14 days and filter. Dose, half to one drachm in water every three hours. For rheumatism. This Canadian agaric is called by the French lumbermen, "rubarbe."

Stoughton Bitters.—Gentian, ʒ iij; orange peel, ʒ i; allspice, ʒ vj; cassia, ʒ iij; red sanders, ʒ iij; cloves, ʒ i. Bruise the whole together and add alcohol, O.ij; water, O.ij. Let them stand a fortnight, shaking occasionally, and filter through paper.

Perry Davis' Pain Killer.—Gum Guaiac, ʒ ij; oil spruce, ʒ i; cayenne pepper, ʒ ss; tr. opium, ʒ ss; gum camphor, ʒ i; spirits ammonia, ʒ i; alcohol, O.ij.

Punderson's Condition Powders.—Fœnugreek, lbj; sulphur, lbj; mur. ammonia, ʒ iv; black sulph. antim. ʒ iv; common salt, ʒ ij. Powder coarsely and mix. Dose for horses, a tablespoonful three times a day.

Bookbinders' Paste.—Take 4 oz. wheat flour (a teacupful), and a gill of cold water, beat into a smooth batter, then add another gill of the cold water; stir well, and pour the mixture into a pint of hot water, to which you have previously added quarter of an ounce of alum; stir over a brisk fire until it comes to boiling point, straining it afterwards if lumpy. This is the best application for sticking labels to bottles, as it does not show when dry.

How to put the labels on.—Paste the label with the above paste, by means of a small brush, applying a coating as thick as a piece of thick paper. Let it stand a minute or two to soak in; then rub nearly the whole off with the finger, seeing that it is merely moist all over; and apply it at once to the bottle, stretching it in its place by means of the thumbs placed at each side; then cover it with a piece of paper to keep it clean, and keep all immovable whilst rubbing hard with the hand to make it smooth.

In labelling bottles for a surgery, first form a plumb line out of a piece of thread and a weight, and hang it back of your shelf; the bottle to be labelled must be now placed in front of this, and turned round until it stands plumb with the line; should it lean at all, let it lean backwards. Now put the label on the bottle, the height you desire, in the manner directed above. The labels of the rest of the bottles intended to go together, should be placed exactly the same height from the shelf they stand upon, as the first one, and each should be measured by it.

Next apply a coating of mucilage of gum arabic, and when dry, another of copal varnish, putting the latter on as thinly as possible.

A complete list of the Medical Works published in Great Britain, from February 14th to March 15th, 1863.

Fownes, George.—A manual of Elementary Chemistry, theoretical and practical, 9th edition, revised and corrected, 12mo., pp. 830, Churchill, 12s. 6d.

Hunt, James.—Stammering and Stuttering; their Nature and Treatment, 5th edition, post 8vo., pp. 262. Longman, 2s. 6d.

Hutchinson, Jonathan.—A Clinical Memoir on certain Diseases of the Eye and Ear, consequent on Inherited Syphilis; with an appended chapter of commentaries on the Transmission of Syphilis from Parent to offspring and its more remote consequences, 8vo., pp. 272. Churchill, 9s.

McClintock, A. H.—Clinical Memoirs on Diseases of Women. With engravings. 8vo., pp. 444. Longman, 14s
Sutton, Francis.—A Systematic Handbook of Volumetric Analysis or the Quantitative estimation of Chemical Substances by Measure. Post 8vo., pp. 290, Churchill, 7s. 6d.
Thudichum, J. L.—A Treatise on Gall Stones, their Chemistry, Pathology and Treatment. Plates, 8vo., pp. 340, Churchill, 10s.

Books and Pamphlets received during the month.—Medical News and Library, Philadelphia, 4 Nos. Hay's Am. Quar., Jan. and Ap. Boston Medical and Surg. Jour., 4 Nos. Dental Cosmos, Philadelphia, The Publishers' Circular, London. Cincinnati Medical and Surgical News, 2 Nos. Report of New York Ophthalmic Hospital. Chicago Medical Examiner. Record of Surgery of battles near Vicksburg, by Professor Andrews, Chicago. The Chemist and Druggist, London. American Druggists' Circular. American Publishers' Circular, 2 Nos. Examination Papers, and Calendar of Victoria College, Toronto, 1863. American Journal of Ophthalmology, N. Y. Bellevue Hospital, Medical College Circular, N. Y. Lindsay & Blakiston's Cat. Cincinnati Lancet and Obs., for April.

MONEYS RECEIVED.

Dr. P. O'Leary, 2 copies, 10s; Dr. T. Charest, Beauport, 5s; Dr. Picault, 5s; Dr. Hingston, 5s; Dr. Archambault, 5s; Dr. Bibaud, 5s; Dr. Schmidt, 5s; Robt. Tracey, Sutton, 5s; Dr. De Bonald, Berthier, 5s; Dr. Evans, Renfrew, 5s; Dr. La Rue, Compton, 5s; M. Robinson, Oshawa, 5s; Dr. Crookshanks, Barrie, 5s; Dr. Nelles, London, C. W., 7s 6d; Dr. Litchfield, Kingston, 5s; Dr. Donnelly, St. Mary's, 5s; Dr. Mack, St. Catharines, 5s; Dr. Blackwood, Pakenham, 5s; Dr. Sauvé, Buckingham, 7s. 6d; Dr. Des Rosiers, 5s; Dr. Courteau, St. Roch de L'Achigan, 5s; Dr. Wells, Quebec, 5s; Dr. Raymond, 5s; Dr. Bérard, Drummondville, 5s; Dr. Ogden, Toronto, 5s; W. F. Henry, Waterbury, Vt., 5s; Dr. Mount, Acton Vale, 5s; Dr. Béique, St. Jean Baptiste, 5s; Dr. McLaughlin, Iona, 5s; J. Fortune, Huntingdon, 5s; Dr. Howey, Kemptville, 5s; Dr. Newcombe, Toronto, 5s; Dr. Wood, Winchester, 5s; Dr. Robillard, Metcalfe, 5s; Dr. Wolverton, Grimsby, 5s; Dr. Filiantrault, St. Timothy, 5s; Dr. Racey, Quebec, 5s; J. Tully, Huntingdon, 5s; Dr. Munro, Fergus, 5s; Dr. Sheriff, Huntingdon, 6s. 3d; Dr. Black, Omenee, 5s; F. Brendon, Brantford, 5s; Dr. Gernon, St. Benoit, 5s; Dr. Hill, Ottawa City, 5s; Dr. Powers, Eaton, 2 copies, 10s; Hon. Dr. Rolph, Toronto, 2 copies, 10s.

Dr. J. A. G., St. Cecile de Milton. Send postage stamps. Lists not received from Dr. W. A. B., Omeenee, Dr. T. M., St. Catharines, and Dr. P. W., Quebec.

Dr. McL., Iona. What size? Medium will be supposed unless heard from.

Persons who have sent requests with their remittances, are informed that they will be attended to within a few weeks at farthest.

Error.—In the receipt for aromatic spts. ammonia in lieu of half a half, read half a drachm.

MARRIAGES.

At Riceville, C. W., on the 17th ult., by the Rev. E. Rainboth, James Ferguson, M.D., of Cumberland, to Susie Rice, daughter of Peter McLaurin, Esq.

At Dremisle, Huntingdon, on the 8th instant, by the Rev. Alexander Wallace, the Rev. James Patterson, of Hemmingford, to Rosina, second daughter of Francis W. Sheriff, Esq., M.D. No cards.

To those subscribers who have remitted the amount of their annual subscriptions, we return thanks.

To those who remain yet undecided, we offer the same inducements for another month, that we did with our first number.

And we would remind those who find their paper discontinued, that they have not complied with its terms.

THE CANADA LANCET.—The terms of this Monthly Periodical are one dollar a year, in advance.

All communications should be addressed to the Editor and Proprietor, W. E. Bowman, M. D., McGill Street, Montreal. Remittances may be made directed either to him or to Mr. John Lovell.