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ORIGINAL COMMUNICATIONS.

ART. XXXII.—*On Injuries of the Intestines.* By W. MARSDEN, M.D., Governor of the College of Physicians and Surgeons, C.E.; Fellow Med. Soc., London; Fellow Medico-Bot. Soc., London, &c., &c., &c.

The death of the ill-fated Robert Corrigan, who was killed on the 16th of October last, at the Cattle-Show, at St. Sylvester, where he was one of the judges, and the bootless trial of his murderers, has led to the following remarks on intestinal injuries generally, and his case in particular.

Dr. Charles Fremont, who alone, of the two medical witnesses examined before the Coroner's jury, is entitled to credit, said, that the cause of death was* "rupture of the intestines, superinducing inflammation and destruction of the peritoneum, and that the rupture was not the effect of previous disease, but the consequence of recent injury."

Notwithstanding the extraordinary testimony of Dr. Reed† upon the trial, he concludes his evidence before the Coroner with these emphatic words:—"With respect to the rupture of the intestine it was necessarily a mortal wound, and no remedy or operation could have been employed to save deceased's life." His definition of "mortal," however, seems, like most of his testimony, to bear a questionable, and double interpretation; as in his attempt to molify his evidence and palliate crime, he said, "mortal wounds are sometimes fatal," as his friend Kelly, the mur-

* Testimony before Coroner, 23rd October, 1855, at Leeds, Megantic.

† This is the same person who enjoys the unenviable notoriety of having incited the first prosecution for *mala praxis* against a member of the Medical profession in Canada East. His victim, in the case of Harrison *vs.* Scott,—John O'Farrell, Esq., M.P.P., plaintiff's Attorney,—was Montague Scott, Esq., M.R.C.S.E., a most amiable and exemplary man, who, after being dragged through two actions of damages, and five or six terms of Queen's Bench, obtained a verdict with costs against the plaintiff after being nearly ruined in reputation as well as means.

derer, when apparently assisting his victim off the field, exclaimed, *with a curse,* "Come along, Corrigan, its good for you all you got, for you have long earned this for yourself." "*Par fratres.*"

In justice to Dr. Fremont, and in order that the case may be properly understood, I will extract *verbatim* from his testimony in chief on the trial.

"Went to Leeds to assist the Coroner in his inquest on the body of Robert Corrigan. Examination was made at the School House at Leeds to which the body had been removed, and where the Coroner held the Inquest. The body presented no marks of decomposition at the time I first saw it. Externally I remarked three lacerated and contused wounds on the scalp. Two of these were parallel to each other, one inch in length and about one half an inch from each other. These were situated at the upper and back part of the left parietal bone. The third was on the summit and centre of the head, and was about half an inch long; these three wounds penetrated to the bone, there was extravasated blood around each of them. There was, besides, a severe bruise or contusion of the scalp, behind the ear, I think, on the right side, cannot be positive about that. These wounds and bruises were occasioned by some blunt instrument, a stick or a stone. There were, besides, a great number of bruises about the body, more especially about the right arm pit, the chest, the fore-part of the neck and both arms, and some bruises also about the back. Then proceeded to examine the body internally, and did so by first opening the head. In removing the scalp, I observed that none of the bones of the skull were fractured, then removed the upper part of the skull. Opened the head and found neither extravasation of the blood, nor any quantity of fluid in the cranium. The general feature of the brain and its membranes was that of congestion. There was no lesion of that organ. The chest and abdomen were then opened. The organs of the chest were remarkably healthy. There were some slight adhesions of old standing and of no moment, of one of the lungs, to the side of the chest. On opening the abdomen, a large quantity of liquid fæcal matter and coagulated lymph was found in the cavity. This, I should say, amounted to fully three pints of liquid. At the lower extremity of the intestines, evident signs of inflammation appeared, that is the parts were highly coloured red. On examining closely, came to an evident rent or rupture of the ileum. That rent was about half an inch long, was oblique with respect to intestine, and extended from right to left. It was situated about 15 inches from the termination of the small into the larger intestines, and was opposite to the vertebral column. There was extravasated blood within the tissues of the intestine, to the extent of about one inch on either side of the rent. Remarked no attempt at union in the wound. The lining membrane of the abdomen and external covering of the intestines gave evident signs of recent and high inflammation, and its connexion had thereby become exceedingly brittle. At this period of the examination I proceeded to open the stomach itself, the whole length of the allimentary canal. The stomach contained a very small quantity of serous fluid, its internal surface was quite normal in appear-

ance, or quite sound. The same was the case with the intestines, with the exception of the immediate vicinity of the wound, which was, as I have said before, discoloured by extravasation of blood. The other organs in the abdominal cavity were also carefully examined, and were found to be remarkably healthy. When I speak of the healthy appearance of these organs, it is as well I should explain that, the external covering had all the appearance of high inflammation. With the exception of what I have stated, the general appearance of the body was remarkably healthy. The inflammatory action I speak of was most undoubtedly the result of the recent injury. Nothing but violent or external injury, sudden or severe pressure, a severe blow or kick would have caused it. Wounds are classified as "slight" "dangerous" and "mortal." This particular rupture I would class among the wounds inevitably mortal, and its usual termination is death."

In a searching cross-examination, Dr. Fremont held the ground taken in his examination in chief, and foiled all attempts to weaken his position, or to prove anything like poisoning. In answer to the question whether he had analysed the contents of the stomach, which Dr. Reed without such process unhesitatingly declared to be *muco-purulent*; he said,

"The quantity of serous fluid in the stomach was about two ounces,—it was a whitish milky fluid, and innocuous. Made no analysis of the contents of the stomach, nor of the intestines; to do so would have been a work of supererogation, because the cause of death was evident, it was not in the stomach or the intestines but external to both.

With reference to the appearance of the stomach, Dr. Fremont who *did examine it* said, "I am positive the colour of the coats of the stomach was whitish yellow, and not reddened;" whereas, Dr. Reed, although he declared that, "he was examining the head whilst Dr. Fremont was examining the stomach," said, the stomach was covered every where with a rose colored blush." *(!)* Yet he further says, "Dr. Fremont examined the abdomen more minutely than I did."

Drs. Morrin, Landry, Sewell, G. M. Douglass, and Jackson were also examined for the prosecution, and confirmed the opinions expressed by Dr. Fremont in every essential particular. The crown, therefore, closed its case without examining the other medical witnesses, who were Drs. Rowand, Marsden, R. H. Russell, Blatherwicke, Swan, and Frazer. So clear was the medical testimony on behalf of the prosecution, as not to leave a doubt to hang a medical opinion upon, and, therefore, none of the medical men were examined on that behalf. They were Drs. Marsden and Landry, (who had been summoned on both sides), Wolff, Deguise, Dussault, Painchaud, J. Blanchet, Tessier, Moffatt, Martin, Fitzgerald, and Ferguson.

No notice was taken, or allusion made, by any of the medical witnesses

of the number of blows inflicted on the abdomen of the deceased, as a cause of peritoneal inflammation, probably on the principle that the greater includes the lesser, the intestine being lacerated, and feculent matter effused into the abdominal cavity; since* "blows on the abdomen, where they do not destroy life by shock, may cause death by inducing peritoneal inflammation." Several cases of this kind are mentioned by Mr. Watson, (on Homicide, p. 186), and more than one has been tried of late years where violence to the abdomen was proved, but no mechanical lesion had been produced; the wounded person, however, died from peritonitis in the course of a few days.

I will now cite one or two authorities in support of the medical testimony as given above, and will conclude this paper with a case of intestinal injury, with penetration both of the abdominal parieties and intestine, that occurred in my own practice, and terminated favourably.

Travers, who is still one of the highest medical authorities on such subjects, says, most truly, † "where the integrity of the abdominal parietes is preserved, it is remarkable that effusion more generally follows. These are ruptures of the bowel produced by falls or blows upon the belly, where the integuments are even unabraided." Orfila entertains similar views, and says, ‡ "Nous distinguons, comme pour les lésions de la poitrine, les blessures pénetrantes du bas-ventre de celles qui ne le sont pas, tout en admettant que la pénétration n'ajoute rien au danger que court le blessé;" and he continues, § "*L'épanchement* des matières contenues dans *l'estomac* et dans les *intestins* suppose le *plus* ordinairement que la lésion de ces viscères a une certaine etendue; car, si elle étoit légère, les matières trouveraient moins d'obstacles à parcourir l'intérieur du canal digestif, qu'à franchir l'ouverture qui aurait pu être faite à ses parois; lorsqu'il a eu lieu, le blessé ne tarde pas à succomber après avoir éprouvé les accidens les plus fâcheux."

Dr. Fremont's opinion that, "the whole of the feculent effusion was deposited in the abdominal cavity during life," is confirmed by Travers who says, ‖ "It appears that effusion is not an ordinary consequence of penetrating wounds, that the same opposition to effusion exists after death as before it, and consequently that such opposition must depend on pressure, not on active resistance. If the gut be full, and the wound extensive, the surrounding pressure is overcome by the natural action of

*Taylor's Medical Jurisprudence, 2nd American Edition, 1850, page 310.
†An Enquiry into the Process of Nature in Repairing Injuries of the Intestines, &c., by Benjamin Travers, London, 1812, 8vo, p. 36.
‡Traite de Medicine Légale, par M. Orfila, Paris, vol. 2, page 582.
§Idem, p. 594.
‖Travers, ut supra, p. 25.

the bowel tending to the expulsion of the matters." Chelins states also,* "that effusion of feculent matter happens more easily in the small than the large intestines easier, in *torn* than in cut wounds."

No doubt whatever is entertained by Surgeons and surgical writers in general, that laceration of the intestines not unfrequently occurs, without external injury, or penetration of the abdominal parietes, and heals spontaneously and naturally, without the fact having been made apparent, either during life, or after the decease of the injured person; as the process of reparation, where it occurs, is exceedingly rapid. The instant inflammation sets in, coagulable lymph is deposited, which becomes speedily organized, as appears by "cutting into adhesive matter within twenty-four hours after it has been deposited, † when small bloody spots may be seen, which mark the future situation of the vessels which nourish it."

Injuries of the intestines, whether with or without penetration, often defy a correct diagnosis, since apparently trifling cases of both kinds ‡ often terminate suddenly and fatally; and, on the other hand, the most extensive and hideous lacerations, with complete division of the intestines, § as often recover, and do well.

It will not, I trust, be considered an uncalled for digression from the medical history of this case, to state that throughout a most exciting and tedious trial of sixteen days duration, Mr. Solicitor-General Ross conducted the prosecution with a judgment, zeal, ability and perseverance, against unusual odds,‖ worthy of better results at the hands of Mr. Justice Duval and the Jury.

Quebec, January, 1856.

(*To be continued.*)

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*Chelistet's Surgery, translated by South, American Edition, vol. 1, page 518.

†Cooper & Green's Manual of Surgery, p. 12.

‡Beck's Medical Jurisprudence, 7th Edition, page 727, Foderé mentions a case where instant death was caused by a small prick, in the small intestines, inflicted by the point of a butcher's knife, though there was neither a sufficient effusion of blood to account for such a result by its effects on the vascular system, nor a sufficient length of time for inflammation and its consequences to arise.

§Edin. Med. and Sur. Journal, vol. 12, 1816, "Carlton's case of Extensive Wound of the Abdomen, with complete division of the Ileum, &c."

‖During the greater part of the trial, the Solicitor-General stood alone against four counsellors for the defence, among whom were some of the most distinguished members of the Quebec Bar.

ART. XXXIII.—*Observations on the treatment of Aneurism of the Arteria Innominata, by ligature of the right common Carotid Artery,* with a Case. By Wm. Wright, M.D., L.R.C.S.E., Professor of Materia Medica, McGill University, &c.

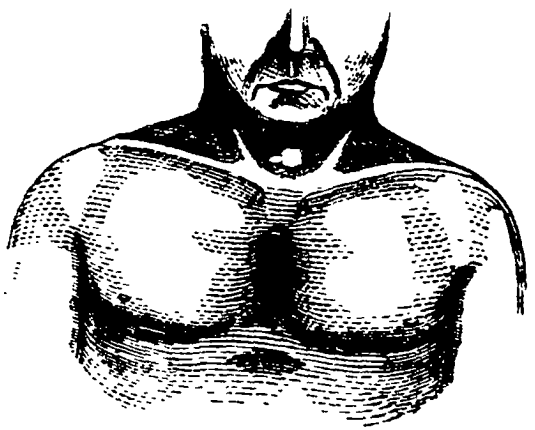
(*Continued from page* 372.)

From the inferences of the antecedent discussion, it may be concluded, as a secondary deduction, that there exists abundant justification to warrant a surgeon in again treating innominatal aneurism by ligature of the right common carotid artery; nay, more, that in certain cases he would be deserving of censure if he permitted his patient to die without having been afforded the benefits of the operation.

The correctness of many of the foregoing statements is strikingly attested by the following case which occurred to me last autumn. It was that of a septuagenarian, having an innominatal aneurism which pointed externally, and so superficially that its spontaneous rupture was hourly expected—the carotid artery was tied—life was prolonged three months—the aneurism underwent reduction in size—fibrillation occurred—the sac was occluded, and circulation from it to the artery ceased—no local accident interfered obnoxiously—death was caused by cerebral disease, the result of the ligature—no event happened that would not have equally followed, had the ligature been cardiac instead of distal—aneurism of the arch, and other evidences of arterial disease, were ascertained post mortem—and the relations of the aneurism proved that no other operation would have been as useful as the one executed—and, in addition, the case presented some unusual features, giving it a singular character. The details, as noted at the time, are these:—

Pierre Bridor was brought to the Montreal General Hospital on Saturday, 29th September, 1855, by Mr. Picault, a medical student, for my advice concerning a supposed aneurism at the root of the neck.

The tumor was situated in the episternal cervical pit; having for pillars the cleido-mastoid muscles, and being interposed between the lower border of the thyroid gland, and a line drawn across the sternal ends of the clavicles. Although fixed, it could be slightly displaced, as, laterally, by manipulation, and, anteriorly, by efforts of deglutition. Its position was relatively affected by changes in the state of the neck; during flexion, its lower segment touched the superior border of the sternum, but when the head was thrown back, these parts were separated by a finger's breadth of intervening space. It had the appearance of two



swellings united in one, of which the largest was hemispherical, the size of a split peach—and the smallest ovoidal, like an almond kernel; in reference to the mesian line, the former was nearly symmetrical, while the latter was on the right side, and, by its superaddition, destroyed the circularity, which, otherwise, the outline would have had. The entire tumor measured, vertically, 1¾ inches, and transversely 2¼ inches, its central axis projected about 1¼ inches from the superficies of the neck. Its surface was uniformly smooth, and rounded; the investing skin had a lurid red color, and the centre spot presented an aspect of pointing, being greatly attenuated, slightly excoriated, and seemingly on the eve of bursting: in short, it looked like a ripe abscess, and misled by this *facies fatua*, the patient had been treating it with poultices. Moreover, it felt soft, and fluctuated most distinctly. But again, it pulsated forcibly; the pulsations were, everywhere, equable—as marked around the periphery as over the summit, and no variations could be discovered in their force, by producing the displacements above mentioned. It expanded with each contraction of the heart, and subsided during the diastole. A bruit de soufflet was heard proceeding from it; although the murmur was limited to the sides, and only heard when the stethescope was pressed rather firmly against them, and it was not accompanied by any fremissement, or thrill. The swelling, by direct compression, carefully applied, was, in great part, emptied of its contents, and pressure upon the right carotid artery rendered it pale, diminutive, and flaccid, in consequence of syncope, which was also induced by this operation. It was first noticed on the 23rd September, and was then as big as the top of his finger, it subsequently enlarged day by day until it had reached the dimensions above

detailed; it had begun with the same softness and compressibility it now possessed, and it had never been hot, nor tender, nor painful, although for a few days before its developement, the skin, *in situ*, seemed unusually red.

Having next examined the chest I found the top piece of the sternum dull on percussion, and I heard throughout this space a strong pulsation which was loudest along the superior border, clearly distinct from the cardiac sounds, and most faint towards the region of the heart. No decided bruit de soufflet could be distinguished, but there was near the right sterno clavicular articulation, the modification of sound that often, by augmentation, passes into a bruit. The right infra clavicular region was rather duller than the corresponding one of the opposite side; here, also, respiration was generally weaker, and over the costal cartilages more blowing than natural. The pulse of the right wrist was somewhat weaker than that of the left one, but no difference was noted in the beats of the two carotids.

He was 70 years of age, by trade a hatter, a stout strong-built man, with large head, short neck and capacious chest. During his long life he had been seldom seriously ill. His chief ailments began a year ago, when he experienced a difficulty of breathing, which he believed was asthma, since then he had been liable to paroxysms that supervened monthly, and after continuing for a few days left him as well as before their accession. The first seizure was accompanied with dropsical enlargement of the abdomen and limbs, that lasted for six months and then completely disappeared. Ever after the first asthmatic attack he had been troubled with cough, which was never very annoying, and generally of slight character. It was attended with the expectoration of a scanty frothy mucus sputum, but at no time with hœmoptysis. His neck had a tendency to "tippet shape," the base was puffy, pitted and had a doughy feel, with an obscure crepitus on being pressed. A month previously a swelling commenced in the submaxillary region and rapidly extended over the neck; after persisting for [illegible] days it went down, but returned in two or three week's time; [illegible] at the date of examination had so far declined as to present a mere [illegible]e over the clavicles, as already stated. When these tumefactions ensued they were accompanied by pains, which he took to be rheumatic; the latter were mostly felt in the right shoulder, and spread thence upwards along the neck. When at their greatest height, he, also, suffered from a sensation of cephalic tension, or as he said his head felt as if it had been jammed into a tin case. The cutaneous venules were slightly varicose in the external part of the right infra-clavicular and mammary regions and axillary side of that arm. No such appearance visible on left side.

In the course of the afternoon I returned to the Hospital in company with Dr. Campbell, our Professor of Surgery. This gentleman, after a most thorough investigation of the tumor, felt convinced that it was an aneurism, and at his suggestion a consultation of the medical staff of the Hospital was called for next morning. There was a full attendance of the members, and all present were unanimous in diagnosing the external tumor to be aneurismal; and prognosticating the certainty of the man's death in, perhaps, a few hours, or at furthest, in a few days if he was left alone to his fate. After a mature deliberation it was resolved that the right common carotid artery should be tied on the morrow.

October 1, Noon.—The Operation.—The patient was placed on the operating table, in the recumbent posture, with his neck extended and face inclined to the left side. An incision was commenced behind the angle of the jaw on the right side of the neck, in front of the sterno-mastoid, and continued downwards, nearly paralell to the anterior border of that muscle, for the extent of three inches, so that its termination approached the circumference of the tumor. The skin and subjacent cellulo-adipose membrane having been divided; the platysma myoides came into view and was cut through upon a director by a button pointed bistoury; a small nervous twig (superficialis colli) appearing across the centre of the wound was purposely incised. A deep stratum of fascia was then divided in the same way as the muscle had been, and exposed several large veins below, which were carefully displaced and retracted; more fatty membrane next presented itself and was cautiously cut through. After which the sheath of the vessels was seen and opened in the usual manner. The wound, having been gradually decreased in length at each successive division, had now a triangular shape, the apex being upon the vessels. The needle was dipped, and as it was entering a large vein rolled forwards, but this having been held aside, the instrument was passed from without inwards; the structure, however, it surrounded proved to be the pneumogastric nerve which lay anterior to the artery instead of in its usual position. The needle was disengaged and reintroduced, but in the direction of from within outwards, when the primitive carotid artery was at once secured. Having assured myself the vessel was isolated from its neighbouring associates, I now firmly tied it by a reef knot: one end of the ligature was cut off and the other allowed to depend from the wound. The wound was closed by a stitch and a couple of straps of adhesive plaster, as well as by a bandage turned round the top of the chest. Scarcely any blood was lost, the drops that did flow proceeded from the integumental incisions as no hæmorrhage occurred during the subsequent manipulations. Upon opposing together the sides of the vessel a sort of epileptoid seizure was

induced, but it was only of momentary duration. After tightening the ligature there was a total absence of pulsation in the temporal and other branches of the external carotid; there was also an appreciable alteration in the tumor, as it became less tense and pulsated more feebly. Chloroform was not administered, and the suffering was endured with remarkable fortitude and suppression of feeling.

4 P. M.—Tumor pulsating strongly, rather larger, particularly in the right abutment, owing to participation in general vascular excitement for his pulse is 92 and fuller, and he is feverish. While returning from the theatre to the ward he vomited a little, but since then he has been composed and has had an hour's sleep. ℥xii. of blood were drawn from a vein of the bend of the elbow. Lint soaked in the following lotion and covered with oiled silk, was constantly applied to the tumor. ℞ Liq. plumbi diacet ℥ ss; acid tannic 3 ss; aquæ Oss. And ℞ tinct digitalis, vini antimonial *ana M* x; quaque secunda hora—which mixture he had been taking during the past 24 hours. Absolute rest and tranquillity enjoined. 9 P. M.—Tumor seems less prominent and more solid. No other change.

2nd October, 12 A. M.—Tumor appears rather more diffused. Pulsations becoming weaker. Pulse not so strong and only 82. Dozed a little last night, head is slightly giddy; skin still rather warm; bowels free; no pain anywhere. Two drops of tr. aconite (U. S. Ph.) to be added to each dose of mixture. 7 P. M.—Tumor certainly feels more solid; skin over centre very thin, candid, dry, and partly fissured, the finger can invert it by gentle pressure without feeling any pulsation, but if it cause more than a slight depression pulsation becomes evident. Pulse fuller, firmer, and SS. A vein near the inner ankle was lanced and about ℥ x of blood allowed to escape; faintness was not produced either by this or the former venesection. To use fluids as sparingly as possible—ordinary drink to be water flavored with wine, and not more than ℥ i ss of latter in the day, he has been, for last years of his life, accustomed daily to take whiskey and wine freely.

3rd, noon.—About 7 a. m. the centre of the apex of the tumor cracked, and there escaped, from beneath a scale of cuticle, a quantity (supposed to be a few drachms) of a fluid which the House Surgeon, who watched it rippling away, describes as very thin, clear, transparent, yellowish and watery, it has since continued to ooze out, though more tinyly, and that now, noon, seen by myself, has the characters above stated, and is identical with serum. The aneurism is, in consequence, less tense and prominent,

feels much harder and throbs more feebly. Wound was dressed without disturbing him from the dorsal decubitus: it looked very well, the upper part appeared to be united by primary adhesion; the stitch was removed. Posture not to be changed. Diet to consist of calf's foot jelly and strong beef tea, with corn starch. 7 P. M.—The leakage of serum continued during the greater part of the afternoon, leaving the swelling so reduced that the latter now consists of a central rising not greater in circumference than a shilling piece, with a lateral elongation, the residual site of the former tumor is firm and marked by indurated welt like borders feeling like solid lymph in the sub-integumental tissues; *visible* pulsation still easily seen in all aspects and generally diffused. *tangible* pulsation also very evident by palpation, and lastly, *audible* pulsation is as distinct as before the sac opened; the cutaneous discoloration has been gradually fading with the disappearance of the intumescence. Patient feels well and has no cause of complaint; bowels open; pulse rather weaker, but of frequency last specified.

4th, Noon.—The flow of serum has been gradually decreasing; pretty firm pressure can be made over the aneurismal debris, with no other effect than the extrusion of drops of serum; the central flake of cuticle has separated, exposing a minute slough; the fluid that escapes is a little darker, and more viscid, than previously, but its other characters are unchanged. 6, P.M.—Progressing satisfactorily.

5th, Noon.—The serum that now escapes is slightly opalescent, as it mixes, during its transit, with a little pus secreted by the ulceration around the slough; wound looks well; pulse 78. Stethescopic signs, over sternum, unchanged; they are more superficial and sonorous than the cardiac, and easily distinguishable from them. 6, p.m.—He broke through restraint, and I found him sitting up, eating his supper, and supported in bed. An egg a day added to former diet.

6th—Slough detaching. Complains of pains along the right side of neck and head. Pulse 78. Substitute for former lotion, ℞ alumin 3iss., spt. lavend. co. 3ij., Aquæ. Oss. 9, P.M.—Appears to be progressing favourably.

7th, 9, A.M., (Sunday).—Cervical pulsations have been weakening and becoming less extensive. No change in those over the sternum. Slough came away, exposing an ulcer the size of a shirt-button, through which, by pressure on surrounding parts, drops of serum may still be extruded. Wound dressed; its appearance is favorable. Pains not so acute, but has an uneasy feeling in the right ear. 5½, P.M.—Had chicken to-day.

8th, Noon.—The external aneurism has been gradually disappearing, the former indurated elevations have been subsiding, in loco the parts feel soft, and are somewhat depressed. Ulcer healthy. Pains continue, they are remitting in severity, becoming worse at 9 or 10 at night, and continuing severe till the morning; they prevent his sleeping soundly, and are confined entirely to the right side. He sleeps well in the day-time.

9th.—Visible pulsation, only perceptible when he is sat up in bed—it is then quite obvious in the old situation, although the vestiges of the original tumor have been removed. A little serum still escapes; it has a reddish tint to-day. Appetite good, and relishes food. Pulse 72, regular and normal. Not wishing to incur the "explosive effects" of digitalis, the mixture was replaced by one containing ipecacuanha and citrat potass.

10th—The episternal cervical pit has now an excavated appearance, is soft, and, apparently, of normal structure, yet it still pulsates, though with diminished energy. The ulcer has contracted to a minute opening, through which a probe may be passed along a fistula of nearly two inches extent, in a direction of first backwards to the mesian line, and then directly downwards; this fistula was discovered by Dr. Holmes, who, with the other physicians of the Hospital, manifested a lively interest in the case, and kindly visited the patient from time to time. On probing this trajet, I felt strong impulses communicated to my fingers, and the instrument was, on each occasion, sensibly elevated. No escape of blood or fluid followed these explorations. Wound in upper part completely healed, lower part suppurating. 5, P.M.—Pains rather worse; has some uneasiness in chest, but no cough, nor dyspnœa. His old cough and expectoration have been gradually leaving him since the day of operation.

12th.—Passed a good night.

13th.—Seized last evening with dyspnœa and cough, which continued throughout the night, but relieved this morning, after the expectoration of a large quantity of pituitous phlegm. He is now, noon, comparatively easy, but does not feel as well as usual, and the cough, though abated, continues. Right side of chest feels tight, and respiration around the right nipple is harsh and abrupt; has some uneasiness in the abdomen, and last alvine evacuation was unusually copious and loose. Pulse 64. Adde misturæ ℥viij. ut supra; tinct. lobeliæ 3iss.; tinct. conii ℥j. Dose as before. Sinapism over right side, and pulv. ipecac. co. gr. v., ch. iij. 4 quaque quarta hora.

14th.—Rather better: pulse 60.

15th, 12 a.m.—No return of dyspnœa; cough still troublesome; expectoration seroalbuminous, frothy, and more scanty; slight œdema of

integuments at base of neck; complains greatly of the pain in the ear and about the face and neck on the right side; pulse only 57, firm, regular, and compressible. Appetite failing; sleeps well; ordered ʒiv. wine. 5 p.m. Complained of some dysphagia, also of a void sensation in chest, which he says, although he did not mention it before, have been felt since operation, and been gradually increasing. R dover gr. iij., hyd. c. creta gr. ij.; quaque 2 da hora. Pergat. in usu mist.

16th.—Better; pectoral symptoms improved; slept well, and pains less intense; wound healed throughout, except at inferior commissure, where ligature emerges; fistulous opening still patulous, and discharging scantily; pulsation in episternal pit has been growing fainter.

17th.—Much worse. The change set in last night. Noon: Greatly prostrated; face sunken and suffused; pulse 52, small and weak; has not swallowed anything for some hours, as he says the passage is closed; respiration noisy; sonorous rales, in various modifications, heard over the front of both lungs, but loudest over the right side; voice, though weak, not otherwise altered, and has at no time deviated from ordinary character; cough occasional and short; expectoration scanty; intelligence unaffected; had no sleep last night; bowels open; urine natural. In lieu of former mixture—R tr. cinchon. co. ʒij., spt. ammon. arom., spt. cinnam. co. aa ʒvi., aquæ ʒivss., m. ft. mist. Sig. coch. maj., secund quaque hora. ʒiv. brandy in addition to wine. To be given liquors as punch and negus. Sinapism to chest. 2 p.m. Visited him with Dr. Campbell, He had not swallowed anything since I last saw him. There was, now, a disposition to sopor, slowness and impediment in articulation, slight involuntary twitches in fingers of right hand. Other symptoms unchanged. At Dr. C.'s advice, a blister was put on the nape of the neck, and mustard applied to the feet; the other measures were continued. Wound looked well, and no signs seen of suppuration in its vicinity. 5½ p.m. More somnolent; did not know his friends this afternoon; right half of mouth is more dependant than the left; moans considerably; coughs but seldom; no heat of scalp; pulse 55. Has taken the medicine and some of the brandy, but refuses nourishment. Enema terebinth statim. Omit pulv.

18th, Noon.—Better; conscious and no tendency to stupor, complains of malaise, and of old pains in particular, feels very unwell, pulse 48 stronger, no muscular twitches, otherwise no alteration. Rept sinapism, blistered surface to be dressed with cerat sabin. 5½ p.m.—Swallowed nourishment for the first time this afternoon since this last attack, its ingestion required a double effort; respiration tranquil, and physical signs less loud. *Make brandy into egg flip.*

19th, Noon.—Dysphagia lessened; appears much as formerly described; pulse weaker and 46. Had an enema terebinth this morning. 6 p.m.—Has since had two stools. Cough troublesome, expectoration difficult; respiration over both lungs harsh and rough, but much loudest over right, no distinct bronchitic rale; increasing thirst and heat of skin; pain continues severe, Add spts. sulph. æther. co. 3vj to mixt.

20th, Noon.—Symptoms generally ameliorated, no pyrexial tendency. Slept a few hours last night. Pulse 52, rather fuller. 6 p.m. Has been using a fair share of nutriment for last two days, strength augmenting, as now he gets out of bed, with assistance, to sit on the night chair. Pulse 48, margins of wound red and swollen.

22nd.—Paralytic symptoms mentioned on the 18th have been becoming generally developed, and now hemiplegia is decidedly manifest: loss of balance in corresponding features; left half of face blank and lengthened; left half of lips pendulous and apposed, while right contracted and open; during a strong expiration the left cheek is puffed out like a bag; cannot close the left fingers as firmly as the right; motion of left extremities abbreviated; arm more feeble than leg; says, that side feels dead; sensibility is slightly blunted; special senses not affected; complains of tickling and irritation in the throat; slept well last night. Pulse 56. The usual difference felt in the two radials now more marked than formerly.

24th.—A small abscess that had been forming in the track of the wound burst this morning, and discharged about 3iij of laudable pus; it opened about the middle of the wound, which is now entirely closed except in that spot, and at the inferior angle where the ligature is. Omit. mist. and let him have gr. ¼ quinin, in solution, three times a day, with 3ss co. Tr. cardam. Simple dressing to neck.

25th.—The ulcer has healed, and the fistulous opening is at length skinned over. Pulse 47. Feels stronger; appetite good; sleeps well; no intellectual derangement; no heat of scalp nor febrile disorder. The old pains of the ear, neck, and face, though daily present, have been lessening.

31st.—Since last report his articulation was, for a few days impeded, but it is growing more distinct, the other paralytic symptoms are *in statu quo*. Has latterly had a tendency to costiveness, and yesterday required a dose of castor oil. Slowness of pulse persists; it seldom has reached 50, thought to day it is 53, occasionally it has seemed to be of the same volume and force in both wrists, unlike the usual condition before stated. Does not complain of pain in ear, nor face, nor neck which have hitherto persisted more or less since first mentioned. Cough not troublesome; pulsation in episternal cavical pit has ceased to be percept-

ible. Skin of this part has become chafed from chin being usually bent on chest, and thus keeping opposed folds in contact. Wound continues discharging at two points, inflammatory turgescence of borders has subsided. Blister on neck has been allowed to heal. No further change.

November 2nd.—Left Hospital, with consent, and returned home, where I continued my attendance. Ligature put on the stretch by india-rubber tape to facilitate its separation.

7th.—No important change has taken place; except that the pulse has been gradually rising, and is now 60, perhaps from his sitting up and being near a warm stove. which is the position he is found in when visited.

9th.—Greatly agitated yesterday by domestic matters, which caused him to pass a restless night. Pulse 6[illegible]; surface hot; cough troublesome; paralysis as at last report.

11th.—Recovered from the mental annoyance, and the consequent excitement has passed off.

13th.—Ligature removed: in attempting to draw it away it broke, and rather strangely, on examining the wound attentively, a small white projection was found in the aperture left by the healing of the abscess, and this projection appearing to be also thread was pulled when the remainder of the ligature was extracted; the latter contained a distinct noose, which was the presenting part,—clearly showing the ligature had separated internally from the artery sometime previously. He miplegia appears rather improved; he can bend his elbow, and raise the arm of the affected side to a level with the top of his shoulder; and can partially clench his hand, but he cannot make the fingers touch the palm; while sitting he can move the leg and bend the knee, but in walking the leg drags; facial distortion not more pronounced than when last noticed; appetite moderate and general health good. *Pulse* 60.

26th.—Hemiplegic symptoms have grown worse; unable to walk unsupported; mental faculties decaying, is very troublesome, peevish and passionate; sometimes talks a little silly. Complains of pains in right ear, and over corresponding side of neck and head having returned and with distressing acuteness. Of late has suffered from urgent thirst. Exhibits no febrile symptoms. When visited is generally sitting up, eating his dinner.

Dec. 5.—Continuing worse, confined to bed in dorsal decubitus, unable to help himself, seemingly much exhausted, loss of power over left arm and leg is complete; urine escapes, involuntarily; bowels sluggish; pulse small, weak and slow; tongue when protruded comes against left

corner of mouth. Cont quin, wine, brandy, and nourishment; together with an occasional dose of ol ricini when required.

7th.—So much improved in feeling that he sat up and used food. Paralysis as before, articulation more difficult.

10th.—Another bad turn similar to that of the 5th instant, but he is now, in addition, soporose and there is a tendency to stertor in respiration; bowels costive; pulse feeble. Habt ol ricini 3ij.

12th.—Improved; more wakeful and attempts to reply to questions asked him; but, from the loss of articulation, his meaning cannot be understood. Has latterly been taking very little nourishment.

17th.—Has had involuntary startings of paralysed extremities; bowels not been opened for the last 3 or 4 days. Habt ol ricini 3ij.

19th.—Return of drowsiness; paralysed parts still retain sensation though in a weakened degree; muscular startings occasionally observed; respiration is rather blowing, and while he expires left cheek swells out. Bowels now only moved when he is given the oil.

23rd.—Sleeps most of the time; when awake is very thirsty, takes hardly any nourishment; pulse barely appreciable, there is an ossification of the vessel which prevents the beats from being distinctly felt, now that the blood current is so weak.

26th.—Has been gradually failing. Lies on his back in a torpid state, but he may be easily aroused and sometimes wakes up moaning, respiration is tranquil, and the pupils are not dilated and obey the stimulus of light.

27th.—He died this morning at an early hour.

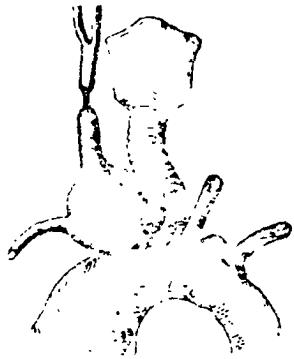
Necropsy, 2½ P. M.—Present: Drs. Holmes, Campbell, Fraser, Sutherland, Scott, McCallum, and Craik; Messrs. Kirkpatrick and Picault. With the assistance of Drs. Scott and McCallum the neck was carefully dissected and the cavity of the chest fully exposed. Between the sterno-mastoids, the subcutaneous cellular tissue was condensed and unusually adherent. The episternal cervical pit presented no tumor, nor other morbid condition. Behind the first bone of the sternum was a large globular aneurism which had caused the heart to be displaced inferiorly. After observing the relations of parts; the heart with its great vessels, as well as the wind-pipe, together with the aneurism, were all removed *en masse* and taken home for closer study. The lungs were rather voluminous but not emphysematous, they had a dark color and contained a large quantity of black blood which was chiefly settled about their posterior parts. Laterally the pleuræ had contracted adhesion to the sides of the great vessels connected with the heart.

BRAIN.—The right hemisphere appeared larger than the left, and was altered in shape; the anterior extremity, especially, being fuller and rounder. Upon section four abscesses were discovered in it—the largest was in the centrum ovale minus, occupying the anterior and middle lobes, it contained about ℥ ij. ss. of pus. Its outer wall was very thin, separated from the pia mater by only a few lines of cerebral substance; by its pressure it caused a displacement and atrophy of contiguous parts—this was especially obvious with regard to the corpus striatum, which was flattened and narrowed; the optic thalamus was also changed. The pus was thick, of a green color, fetid, and, in part, clotty; upon its removal, the inner surface of the cavity appeared very smooth and glistening, as if lined by a serous membrane—the cavity was irregularly spheroidal, and had no communication with the lateral ventricle. The abscess next in size was in the posterior lobe, to the outer side of the cornu, but distinct from it, it held about ℥ss. of pus of same character; immediately below it, but completely isolated by a stratum of cerebral substance, was the third abscess, it was of still smaller capacity, and was not larger than a small marble. The last was in form like a bean, and just about as bulky; it was situated externally to, and behind the, corpora quadrigemina. The fluid in each had the same character, and was like that described as found in the first; and the wall of each had a similarly worn appearance, rendering it as smooth, as if lined by a membrane. The medullary matter around those abscesses was firm, and rather indurated, particularly the portions which seemed to have been most encroached upon, as the outer wall of the largest abscess, this was, in its thinnest part, almost coriaceous; otherwise the brain substance was remarkably healthy; no fluid found in the ventricles; no unusual congestion of the veins; the membrane was healthy; there seemed to be some slight serous effusion beneath the arachnoid over the left hemisphere, but it was very slight, and not decided. The right crus cerebri appeared to be more diffluent than ordinary, but the change was only in its medullary exterior, and had not destroyed the original white color. No alteration in pons, medulla oblongata, cerebellum, nor elsewhere.

The parts removed having been dissected by my friend, Dr. MacCallum, and myself, the following additional facts were noticed:—

ANEURISM.—The aneurism began in a dilitation of the arteria innominata at its origin; and this enlargement, as it ascended, became so great that the vessel had given way, and a sac had been formed, partly by the arterial coats, and partly by surrounding textures. Its sac was formed anteriorly and superiorly; by, firstly, the right sterno-hyoid and sterno-thyroid muscles, which were attenuated and flattened, and were

bound to the analagous muscles of the opposite side by the deep layer of the cervical fascia, which was, here, strongly condensed, and much thickened; secondly, by a submuscular stratum of fat in considerable abundance; and, thirdly, by subjacent cellular tissue in a condensed state. Posteriorly, and elsewhere, the sac was formed of the expanded coats of the innominatal artery, which were thinned, and covered by a consistent layer of adipose tissue. The right carotid and subclavian arteries arose from about the middle of the outer circumference of the swelling; they were, here, somewhat dilated, particularly the first vessel, each forming an infundibulum which, by diffusion, was lost in the general envelope, and also contributed towards its formation.



The aneurism formed a tumor of a spheroidal shape; its longest or vertical axis measured 2¼ inches, its transverse 1¼ inches in the widest part; its greatest circumference was a little more than 6 inches; above this it became gradually rounded, and was lost in a superior segment, having no outlet; below this it grew more slender, and most inferiorly was only 4¼ inches in girth. It was placed obliquely across the lower part of the trachea, the inferior extremity pointing to the left, and the superior to the right side; the main body of the tumor was on the right half of the trachea. The tumor and trachea were separated by a firm and dense layer of fat; in the back part of the former was a groove where the latter had rested. The aneurism, posteriorly, had also the following relations from without inwards:—superior intercostal artery, phrenic nerve and internal mammary artery, while more posterior to these was the pneumogastric nerve, and curving round the swelling the recurrent laryngeal branch; its external border was connected to the inner surface of the superior lobe of the right lung, by transverse bands of cellular membrane. The aneurism was solid; and upon division its cavity

was found filled with a hard mass of indurated fibrin, disposed in concentric laminæ, and of a buffy light red color. The only communication through the aneurism was a channel, admitting a bougie, through which the blood flowed from the aorta into the subclavian; and a small fissure existed on the exterior of the tumour at the junction of the sterno-hyoid with the sterno-thyroid, and nearly in the mesian line. It led into a canal directed downwards and backwards, situated within the fibrinous mass, nearer to the anterior than the posterior wall of the sac, and extending nearly across from the one to the other.

Right Common Carotid Artery.—This vessel was intercepted 2¼ inches from its origin, it gradually tapered to this limit, as a firm distended, slightly flattened cord; but here its place was occupied by a strip of condensed areolar membrane, which connected the former part with the rest of the artery; beyond this band, the artery began pointed, and gradually swelled out into its usual form and calibre. The interior of the portion below the band, was filled with a clot of lymph, which was firm, truncated, reddish, fibrillated, and adherent to the inner wall; the superior portion was occupied, for nearly an inch, by a similar plug, but above this point, the artery terminated in the external and internal carotid, both of which branches were pervious, although the former contained, at its origin, a delicate clot, measuring three lines in length, and extending from the rest. The sheath of the vessels was confused, and not distinguishable at the place where the artery was defective; a short distance above and below this, it was thickened and adherent to the outer coat of the vessel; and still further upwards and downwards, it was remarkably well defined, but scarcely abnormal. The pneumogastric nerve proceeded between the internal jugular vein and artery, from behind forwards, and continuing to be directed anteriorly, it lay in front of the latter inferiorly, and was separated from it for the distance of two lines; it next approached the sac, became flattened, running, in this condition, over the right segment of the aneurism, and leaving the latter opposite the commencement of the subclavian, where it gave off the recurrent, and then proceeded onwards in its usual course. The internal jugular vein was external to the artery and nerve, and on a higher level than either; its lower part was directed more anteriorly than usual, it impinged on the top of the tumor, ran over its external circumference, united with the subclavian, and the continuation (vena innominata) passed across the tumor, and joined its fellow of the opposite side.

Aorta.—The *ascending* portion was considerably dilated, being 5¼

inches in circumference across its inner surface. The lining membrane was scabrous from atheromatous deposits, some of which were disposed in an annular form resembling ring worms. The *Arch* was aneurismal and extensively degenerated. The dilitation was principally obvious between the left carotid and left subclavian arteries, where it rose up like a bladder; it also, conspicuously, involved the anterior and posterior walls of the arch just above its commencement; circularly the arch, here, measured6¼ inches when flaccid. In the upward protrusion there was a fibrous clot, looking like placental structure, of a buff colour, varigated with red, reaching as low down as the innominatal opening, and connected to the contiguous surface by delicate trabeculæ; a second clot of similar appearance, but much smaller, was, also, found attached to the upper part, a little further forward. The lining membrane was variously diseased, in part eaten away by minute erosions; in one place looking like an ulcer, there being an irregularly ragged solution of continuity, in the lining membrane, which was walled round by a raised fungoid border, having for its floor the middle coat, stained of a dark red color; and measuring 1¼ inch by 1 inch; elsewhere the inner membrane was irregularly thickened and atheromatous, here rosily stained and there morbidly white. The *descending* aorta was, also, in a state of atheromatous degeneration.

HEART.—Aortic valves normal, but the ostium ossific and studded with bony plates; mitral valve fibroid, base encircled with calcareous deposits of coralline shape. Both these valves close perfectly, and preclude regurgitation of fluid. Tricuspid and pulmonic valves healthy. Left ventricle hyphertrophied, its wall being seven lines thick; no over capaciousness of its cavity; left auricle slightly thickened. No further leisons ascertained.

(TO BE CONCLUDED WITH REMARKS.)

ART. XXXIV.—*Case of Purpura, Rheumatism, and Disease in the Valves of the Heart.* By DR. STEIN, Lachine.

A young man of the name of S. Onge, aged about 22, had rheumatism of the joints, by and bye signs of disease in the heart appeared along with purpura. I was called in to see him, and on looking generally at the symptoms gave an unfavorable prognosis. I, however, recommended

lemon juice, but owing to circumstances he was not able to obtain this, and he was, therefore, obliged to correct the purpuric condition of the blood by aromatic sulphuric acid, a few doses of which only he took. I left him under the expectation that nothing would be of consequence, and that inevitably he would die. In three months, however, I could not believe for some time that it was my old patient I had met again; he was completely restored. After I gave him up he had been advised to take sarsaparilla, and he got gradually better.

The purpura in this case was the first condition that directed my attention to the state of the heart, for as Dr. Short, of the Edinburgh Infirmary, used to remark, and as I have often verified myself, this symptom was often seen in conjunction with this state, independent of any disease in the blood, and on examining more minutely, I found that at the same time that he complained of pain in the region of the heart, there were abnormal murmurs, and tumultuous action, with quickened and laborious breathing, indicating that not only was the heart diseased, but that the circulation was impeded, and the breathing, as a consequence, affected —the secondary effects of endocarditis in fact. Generally speaking in these cases, under ordinary circumstances, we infer, that not only has there been inflammation, but that effusion of lymph has taken place on the valves, occluding the orifices, and rendering the circulation embarrassed, and we are able to pronounce an unfavorable prognosis, and we never expect anything but an incurable state of disease. What altered the common run of circumstances in this case then? It must have been the condition of the blood; the plasma must have been thin and unhealthy, and as soon as lymph was secreted on the valves it must have been washed away with the current. This purpuric state, it may be mentioned, was not uncommon about the time. A few cases having been seen by myself about the same time, perhaps from deficiency of a vegetable diet. This case, perhaps, exhibits the possibility, however, of a continued irritation about the valves and orifices, independent of any organization of lymph keeping up an obstructed circulation, and leading to secondary symptoms of diseased heart by the swelling of the valves alone, and exceptionally to the rule, should make us cautious in our prognosis; it leads also, perhaps, to the inference that in the course of rheumatism, although we often find increased fibrin in the blood, it does not constitute the essence of the disease, or this increased fibrin may sometimes be unhealthy, and, therefore, not capable of the usual organization.

The analysis of the blood in purpura is quite contradictory. Becquerel and Rodier asserting a deficiency of fibrin, while Dr. Rees thinks that,

in it, like Bright's disease, there are two stages, in one a deficiency, in the other a redundancy, and Dr. Garrod that there always is an excess of fibrin. This contradiction leads to doubt as to the fact whether this question ought to bear on the product of inflammation in the inflamed valves in this case, but this as it may, in respect to the amount of fibrin in purpuric, and rheumatism, my own opinion is, reasoning from what I conceive may be almost positively deducible from this case, that the fibrin thrown out, as a result of the inflammation in the purpuric habit, from its little plasticity, has not been allowed to become organized, but instead, has been removed as soon as deposited by the current of blood. Another question arose in my mind; might I not be deceived about the disease in the heart, for in true scurvy we often have dyspnœa, and tumultuous action of the heart, with irregular pulse, along with symptoms of rheumatism, but regarding these at the time, and taking them into mature consideration, I could not but conceive that the heart was laboring under great excitement and inflammation, so much so, that the peculiar treatment of endocarditis was recommended to be used, though not put into effect.

If this natural cure of exuded lymph on the valves could take place in the course of disease, could it not possibly occur that a condition of the blood resembling this could be set up that might produce similar results? Does mercury induce a state similar? or does the long continued use of alkalies, as the liquor potassae occasions a state of the blood where fibrin has no tolerance, or where it is reduced to a condition that plasticity is not one of its attributes? These are questions that are well worthy of being solved, but they are difficult from the very complex chemical properties of the blood itself. Can we at will alter the condition of the blood? We can. For example in giving copaiba, rhubarb, &c.; it is changed, also in Bright's disease, and in ichrus, and in purulent absorption, the symptoms are unmistakable. Chemical agents can detect nit. potass and hydriod. potass; and in purpura and scurvy, the blood globules are so disturbed that they admit of a ready disintigration and easy transudation through the capillaries.

ART. XXXV.—*Is the Sulphate of Quinine always a safe remedy in the Endemic Fevers of Canada?* By JOHN JARRON, Surgeon, Dunnville.

Of all the medicinal remedies to which the property of specifics have been attributed, the Peruvian bark, by its effects in aguish and periodi-

cal diseases, has most decidedly, and for the longest time, maintained a claim to such a character. In the sulphate of quinine we have the same remedy in a new form, in which the active properties of the bark are concentrated, and the obstacles and objections to its use in the early stages, or complicated states, of these diseases are almost entirely obviated, so that we now see it exhibited daily, as a specific, in doses equivalent to such a quantity of bark that neither could have been allowed or retained on the stomach.

The result of this practice, as reported in the medical journals of the day, very much resembles the ascertained effects of many other medicines that have been looked upon as specifics in certain diseases, and in which their doses have been increased, and their use exhuded almost without limit. The use of mercury in syphilis, of calomel in bilious fevers and bowel complaints, of tartar emetic in pneumonia, of opium in delirium tremens, and of brandy, wine, and stimulants in certain forms and stages of fevers, may be cited to show the extent to which such remedies may be given, and their several doses increased with safety, and even with advantage, in certain states of the constitution; whereas to a person in health, or whose constitution was under the influence of a different form of disease, the same medicines, even in small doses, would be dangerous, and might prove rapidly fatal.

In the sketches of the endemic fever of Canada, published in the Montreal Medical Journal, I spoke guardedly and with hesitation of the effects of quinine in some of the forms that this fever may assume, as observation had convinced me that it often aggravated the paroxysm of fever that it was intended to prevent; and though I had, at that time, never seen it lead to a fatal termination, yet I was far from being satisfied that such an untoward event might not take place.

The following case has since come under my notice:—

A young man employed on a boat on the Grand River had suffered from three or four attacks of ague, recurring every second day; he continued at work, and was only confined to bed during the paroxysm. One forenoon he took from eight to ten grains of quinine to cure his ague. During the subsequent night he was seized with vomiting, and speedily got into such an alarming state that his companions called me up.

I found him vomiting occasionally, the features much shrunk, the extremities, and even the whole body, cold, and bathed in a cold perspiration. His head was hot, yet moist; his pulse was variable, but soft, full, and without force; there was restlessness and great general depression, and the whole phenomena were those of a case of well-marked malig-

naut intermittent. On the application of the usual remedies, he recovered from this state in a few hours, and had no subsequent attack of ague. He took no more quinine.

A child about six years of age had suffered from fits of ague, recurring every second day, for about two weeks, but was only confined to bed during the paroxysms.

She had taken several doses of infusion of senna, and the mother, at last, gave her about four grains of quinine to stop the ague. About the usual time for the recurrence of a paroxysm, she fell into an alarming state of insensibility, and I was sent for.

She was then insensible to external impressions; the countenance was full, but the expression, as well as the color of the whole skin, indicated a case of ague, in which the secretions were excessively disordered; the forehead was hot, but moist; the pulse variable, usually full, soft, and easily compressive; the heat of the body varied suddenly, as well as the quantity and character of the perspiration, but the tendency of the extremities was to get cold and white. The patient sank during the night. The symptoms and course of this case would also entitle it to the appelation of a malignant intermittent.

In the season of 1854, the members of a large family suffered from attacks of fever, complicated with severe and depressing bowel complaints. In all the cases the secretions were excessively depraved, the paroxysms were irregular, and the tendency to sinking was great.

One woman had been bedrid from a rheumatic affection, yet she had the fever in the same form as the others. Though exceedingly reduced by the disease, yet the symptoms ultimately gave way; the bowel complaint ceased; the tongue got moist, and clean at the tip and edges, and the paroxysms regular both in form, and the time of their recurrence. She, at last, took a dose of five grains of quinine on the subsidence of the third stage. A regular paroxysm did not recur at the usual time; there was no cold stage; a restless state, with yawning and partial sweats, and a state of comatose insensibility set in. These symptoms were not alleviated by treatment, but continued for three days, when the patient sank.

In all the other cases the paroxysms ultimately became regular, and were stopt by a five grain dose of quinine. In some of them the sufferings during the period of the first suppressed paroxysm was greater than it had previously been. Coma did not appear in any of them, though the active state of the brain was evidently disturbed for a few hours during which the phenomena of the fever would have been present unless arrested by quinine.

These cases may not be sufficient to establish that the untoward

symptoms that ensued after the doses of quinine were the direct consequence of them, but will suffice to raise a question, and to direct the attention of the profession to the point, as well as to induce caution in the present indiscriminate, and almost unlimited use of that medicine. To me they are exceedingly interesting as illustrative of a point of practical medicine to which my attention had for some time been directed. If it be allowed that the sufferings of a patient may be increased by the suppression of a paroxysm of fever by quinine, there may be no limit to the extent of this suffering, or to its ultimate consequence. Had the disease in these cases been suppressed by the quinine, we would at once have attributed this to the effect of the medicine. There was nothing in any of them to lead one to expect a different result, or to say that the fatal symptoms might have come on had no quinine been given. The proof of either supposition may be about equal, yet, in every one of them we have the farther fact of the modification of the paroxysm, tending to show the susceptibility of the constitution to quinine and its ardent effects on the disease.

Considering the free manner in which quinine is now being used in fevers, both of a continued and paroxysmal type, it becomes an object of importance to ascertain the particular symptoms and appearances in paroxysmal cases, that may render its effects dangerous, if not occasionally fatal. These cannot be pointed out in an adequate manner by stringing together certain symptoms as contra-indicative of the use of quinine. They must be gathered from a correct knowledge of the character of the disease itself, and of the functional derangements and organic changes with which it is accompanied, or on which it may depend; as well as of the effects of quinine in its different stages, and in the varied and complicated forms it may assume.

In the most simple cases of this fever we have the bilious symptoms and functional derangements of the process of digestion, as well as the phenomena of fever, and this perfect, and recurring at distinct intervals. In the treatment, these two states must be separated, and looked on as cause and effect, for though it may be difficult to reconcile this with the theories of the disease, it is yet a practical view that will seldom lead to error. In slight cases of ague, quinine will generally stop the paroxysm, but seldom entirely remove the bilious symptoms so that it may not return after a time, or never aid in an attack of fever. When the secretions become extensively altered, and the blood consequently diseased and loaded with excrementitious matters—either with or without inflammatory action in some of the organs or tissues, and with such inflammatory action in otherwise simple cases, the ague will cease; the fevers become remittent or continued, passing from the one to the other,

and often becoming complicated, and showing a variety of congestive or typhoid symptoms according to the state of the secretions and the inflammatory action present. As these subside, or are removed by medicine, we again have the simple intermittent showing itself in the course of convalescence.

In cases of simple ague the action of quinine may be looked upon as free from danger. In cases of remittent and continued fevers, and in the most of their varieties and complications, I have never seen it, even in large doses, followed by deleterious consequences. In such states of disease the constitution would seem to be not susceptible to its action, the process of natural digestion being entirely suspended. It appears to be then almost inert, doing little good or harm in whatever dose it may be administered; and it is thus we must account for the result of the large doses now introduced into the treatment of fevers. The danger would seem to be confined to that class of cases in which excessively depraved secretions, with a tendency to sinking and congestive symptoms show themselves, and to a certain stage even of these; when the digestive powers are still present and in a tolerably perfect state, as this seems to be essential to the susceptibility of the diseased constitution to the action of quinine. The two first cases are instances of it in nearly simple ague, especially that of the child, where the appearances were so indicative of a tendency to congestive disease.

It is only to be dreaded in a more advanced stage of complicated fevers, when intermissions become tolerably perfect, the tongue gets moist and cleaner, and the pulse and skin indicate an approach to convalescence. It was in such cases, when I had hailed with satisfaction the first appearance of the fever to break, and given a large dose of quinine to arrest the course of morbid action, that I was at first struck with the occasional result, and saw plainly that, though the paroxysm was interrupted, yet the state of the patient for the period was not improved, by the substitution of an irregular for a perfect paroxysm.

This effect is accidental, and not to be attributed to any poisonous quality of the medicine, but to its action in suspending or interrupting a process of nature, and which may be her course of ridding herself of the disease. An irregular paroxysm is the most distinctive feature of a malignant intermittent, and the symptoms of this are always prominent in the cases of this outward effects of quinine.

The extent of dose would seem to have little effect on the result, so that it be sufficient to interfere with the course of the fever. I first noticed it to follow large doses of ten grains and upwards; I lessened the quantity, and now give instances of the effects of five grain doses.

Dunnville, 6th February, 1856.

REVIEWS & BIBLIOGRAPHICAL NOTICES.

XLI.—*The Action of Medicines in the System.* By FREDK. WM. HEADLAND, M.B., B.A. F.L.S., M.R.C.S., &c. Second American Edition, from the second revised and enlarged London Edition. Philadelphia: Blakiston. Montreal: B. Dawson. Pp. 408. 1856.

Mr. Headland has embodied his doctrine of medicinal action in ten propositions, which will be found in the *Medical Chronicle*, vol. i., p. 114, in the notice of the first edition of the present work. In these he exhibits his concurrence in the humoral opinion, that the circulation is the great theatre wherein drugs play their parts, and displays a remarkable illiberality in his concessions to opponent theories. He can, therefore, expect the less consideration at the hands of others, who may stop to consider the soundness or not of his own views.

His sixth proposition positively states that "whilst in the blood the medicine may undergo changes." This transformation is asserted to be of a chemical kind, and to result from a re-arrangement of the elementary molecules of the original substance, whereby a medicinal compound of different composition is manufactured—or to spring from changes transacted between the ingredients of the drug and the component particles of the blood, whereby the latter suffers a partial abstraction, or gains some new acquisition. The accurate investigation of the truth of these positions involves several inquiries; such as the fact of medicines being found in the blood, the certainty of medicines undergoing no decomposition in the blood, and the probability of medicines being decomposed by the blood in transitu.

I. *The fact of medicines being found in the blood.*—That medicines find entrance within the vessels and diffusion through the blood after their ingestion is a truth fully established by repeated experiments, and complete lists of substances so found have been compiled and recorded. Upon this, as a mere fact, then, no more need be said, but not so of the account to which it has been turned. Many have imagined that its discovery is a proof of the medicine, in point, acting, through the blood, upon humoral principles. But nothing can be more erroneous; yet Mr. Headland, we regret to say, labours under such a delusion; he exhibits it in every page:—he fell into the error at the first page, and remained shackled with it to the last. We say error, because the fact, thus distorted into an obscure signification, is not self-explanatory. It is no more an evidence that medicines act by the blood than it would be of their acting by the stomach because they may be found there when swallowed. The very experiments, which are often adduced, in support

of blood-presence meaning blood-action, may be shewn to equally refute such an opinion. A full consideration of those of Blake and Vernier, which are so generally known, has led us to the conclusion, that so long as *innervation*, and the other normal functions of a part are interrupted, which they must be by ligaturing its principal vessel, medicines will not produce their effect; that when these are allowed to proceed, the customary results follow, so that, *a posteriori*, the circulation of medicines is a *coincident* occurrence with their action, and not the cause of action. To affirm the latter would be as illogical as to assert that the falling of mercury in the barometer-tube causes rain, or the escaping smoke, during the combustion of moist wood, produces such combustion. Medicines, again, are circulated in order that they may be conveyed to distant parts for the institution of a *remote operation by contact;* of this numerous examples might be furnished: and, lastly, medicines circulate with the blood *to be eliminated* from the system through the emunctories. Yet in neither case is there the least reason for presuming they have been acted upon by the blood, because those to which we now refer are excreted in the same composition as they were administered; and because when foreign matter reaches the circulation it is exclusively under the dominion of the peculiar power attached to all living beings, while neither molecular composition nor decomposition are under the control or direction of the laws of chemical affinity and repulsion, to which latter agencies the imputed action of medicines in the blood is referred.

II. *The certainty of medicines undergoing no decomposition in the blood.* —This is a point easily established. For medicines can only reach distant organs and secretions by the blood; if, therefore, they are *found* in these in a complete state or in the same condition as before ingestion, they must have circulated through the blood without having undergone any decomposition. Medicines belonging to this head are numerous, and we have arranged them into 8 groups. 1st. Morphia and the narcotic principles of belladonna and its alliances; 2nd. Alcohol, ether, camphor and turpentine; 3rd. Volatile oils and odorous principles of a fetid character as cinnamon, assafœtida, &c.; 4th. Coloring matters; the list is so comprehensive that we are warranted in concluding that all coloring principles pass through the blood unchanged; 5th. Mineral acids; 6th. The following salts:—Borax and chlorid barium; iodide, bromide and ferrocyanid of potassium; carbonate, nitrate and chlorate of potass. Analogy would lead us to expect the corresponding compounds of sodium and soda; 7th. Metallic substances; 8th. A few other substances, viz: alum, quinine, iodine and cathartin. The above list is as complete as present resources enable us to make it, and there can be no doubt that

it will be enlarged hereafter when additional investigations have been superadded to those, by which the foregoing has been demonstrated.

III. *The probability of medicines being decomposed by the blood in transitu.*—Our knowledge of this circumstance can only be obtained indirectly. We cannot say of a medicine removed from the body, in a transformed character, that the change occurred in the blood; for before the effect could be there located, it is necessary to exclude from the inquiry the agencies of other parts by which the decomposition may have probably been effected: Thus, 1st. Before absorption medicines may be decomposed in the stomach; 2nd. In the excretions after elimination; and 3rd. At the lungs during circulation. The first class comprises among other alterations several of a strictly chemical kind—acids unite with bases, alkalies are neutralized, alkaline earths and bases combine with acids, compounds of vegetable acids are converted into carbonates, carbonates under some circumstances are decomposed.—Nitrate silver certain other salts and metallic oxides all enter upon new combinations. —Again certain insoluble agents saline, oleaginous, resinous, balsomic, &c., become soluble by commixture with the alkalinefluids of the duodenum. Other insolubles as calomel, &c., are dissolved by the alkaline chlorides that are present throughout the whole alimentary tract; and lastly, chemical reductions are now and then observed as of bichlorid mercury into calomel or reguline mercury. That some medicines are decomposed in the excretions is shown in two principal ways—Firstly, by the substance being removed from several emunctories and only excreted changed by *one*, while from the others it passes out undecomposed. Such as turpentine; this circulates in the blood without suffering any change, and it is eliminated through different surfaces; in the breath it may be perceived by its characteristic odor, but in the urine it has undergone a change, and instead of its old odor it now has that of violets. Secondly, the same fact is declared when a medicine is removed from the body in different states of constitution, thus sulphur is sometimes exhaled as sulphurous acid, and at other times as sulphuretted hydrogen; the same has been observed of its compounds with metallic bases, these are sometimes removed unchanged and at other times more or less altered. Hence the effect is to be referred to the agency of the secretion in which the substance is found and not to the blood through which it passed intact. In the third and last class we include the following examples:—The conversion of benzoic and cinnamic acids into hippuric acid, of tannic into gallic and pyrogallic acids, of a similar transformation in the astringency of uva ursi and cinchona, of salicine into hydruret of salicyle, and of oil of mustard and ammonia into sulphocyanid of ammonium. These conversions are simple oxidizations, and as such

we think it more probable that the oxygen causing them is derived from the air of inspiration than from the blood. From the moment of absorption till arrival at the lungs the substances are in contact with venous blood, ar ' if the gas of the blood were to induce any change it would, as *the gas is then carbonic acid, be of a different nature to that which really* occurs. But once at the lungs a portion of the respired oxygen meets these medicines in common with other matters in the blood spread out to receive its action, and the same chemical change is wrought upon them as upon the latter, as upon the fibrin an l red globules, *i. e.*, they are oxidized.

Now, the explanations which have been above given of the probable way in which changes occur in medicines that are eliminated from the system in an altered form to that in which they entered, comprises the entire list of medicinal substances which our present resources furnish us with, as being changed after ingestion. Until, therefore, it can be demonstrated that these changes do not occur from digestion in the alimentary canal, from chemical decomposition by admixture with the ingredients of excretions, and from respiration, and until it can be actually proved that changes do positively occur in the blood, we must conclude that there *is no authority for affirming that any medicine is at all changed in the blood during its circulation.* And, therefore, that Mr. Headland's sixth proposition is unwar...nted and erroneous. In pursuance of his opinion he proceeds to state, that the changes effected upon medicines by the blood is of three kinds, viz.:— combination, re-construction, and decomposition. Upon the change of combination nothing definite occurs, though a good deal of irrelevant assertion is introduced ; it is, however, stated that there is an excess of alkali in the blood, and therefore it is supposed that when acid medicines are taken they are, in part, neutralized by it, forming a salt of soda ; it is further imagined that this union does not destroy the influence of the acid, as it is succeeded by the elaboration of some other acid, perhaps an organic one, that is capable of acting as a substitute for the first. This is the only example that is stated of combination in the blood. Of changes of re-construction it is assumed that the elements of a body may be distributed in the system and combined together anew *without any material alteration of its properties, as tannic acid into* gallic acid, and some of the other examples we have above given of pulmonary oxidation. The changes of decomposition are described to be such disarrangements of the elements of a body as shall neutralize or reverse its action. No example is given, but it is next stated there is free oxygen in the blood, and the most important change to which all organic substances are there liable is oxidation. The reader will perceive from

what we have before said, that statements like these are entirely gratuitous, and if he measures them by the rules before laid down he will also discover them to be purely chimerical.

XLII.—*The transactions of the American Medical Association.* Vol. 8. Pp. 760. Philadelphia: T. R. and P. G. Collins.

This is a goodly sized volume, containing papers of more than ordinary interest. It affords flattering evidence of the talent, energy, and industry of the American profession. The extensive diffusion of quackery, the thousand and one forms it has assumed, and its apparently flourishing condition in the United States, has sometimes made us doubt whether legitimate medicine could ever successfully resist the multifarious and deadly attacks to which it is subjected. So long, however, as there is a body of working, true-hearted men, such as comprise the American Medical Association, united together for the advancement of the science of medicine, and guided in their professional intercourse by the code of ethics of that body, we are convinced there is not the least danger to be dreaded from either the direct assaults of outsiders, or the more insidious undermining operations of seeming friends. The Association has our best wishes for its prosperity and continued usefulness.

The volume of transactions before us contains, besides the minutes of the Eighth Annual Meeting, the following reports and essays:—Report of the Committee of Publication; Report of the Treasurer; Address of Dr. Charles A. Poe, President of the Association; Report on the Diseases of Missouri and Iowa; Report of the Committee on the Hygrometrical State of the Atmosphere in various localities, and its influence on health; Deformities after Fractures; Report on the Diet of the Sick; the Pathology, Causes, Symptoms, and Treatment of Scrofula; Report of the Committee on the means of Preserving Milk, and on the influence of Pregnancy and Menstruation on the composition and nutritive qualities of that fluid; Report of the Committee on Dysentery; the effects of Alcoholic Liquors in Health and Disease; Sketch of the Caustic Pulverizer; PRIZE ESSAY—Statistics of Placenta Prævia; plan of organization of the American Medical Association; Officers of the Association for 1855; List of Permanent Members.

Dr. Hunt's investigations into the influence which hygrometrical conditions of the atmosphere have on health, are, we hope, the commencement of a series which will eventually enable us to form an approximative idea of the value of a high dew point in the production and spread

of diseases. It has long been known to medical observers, much longer than Dr. H., is apparently aware of, that an impure atmosphere of an elevated temperature and loaded with moisture is inimical to health, and one of the conditions most favorable to the rapid propagation of epidemic diseases. His own countryman, Dr. Hosack, in an excellent paper read before the Literary and Philosophical Society of New York, June 9, 1814, entitled "Additional observations on the laws which govern the communication of contagious disease and the means of arresting their process," gives full prominence to these views. Indeed, he points out very clearly, by numerous illustrative instances, the virulence with which plague, dysentery, yellow fever, &c., spread through communities when there is a combination of what Dr. Barton has termed *terrene* and *meteoric* causes. Speaking of epidemic dysentery, he says:—This disease, like the plague, appears also to derive much of its infectious character from the condition of the atmosphere in which it takes place; in pure air, where cleanliness and ventilation are attended to, it rarely extends beyond the individual in whom it first originates; but in a vitiated atmosphere, *loaded with moisture*, marsh effluvia or the perspirable matter, and other secretions of the human body, especially where many persons are crowded together and in small apartments, dysentery communicates itself to the greater part of those who may be exposed to its influence." The extensive experience of Dr. Donald Munro and Dr. John Pringle, both army Surgeons, led them to adopt similar conclusions. The former observes, that in camps the more hot and rainy the season, the more wet and marshy the ground, and the more the air is replete with putrid vapours, the more frequent and the more fatal is the dysentery. The latter remarks, "some dysenteries appear upon first taking the field, but the cases are never so bad nor nearly so frequent, as towards the end of Summer; they then become epidemic and contagious. They have always been numerous and worst after hot and *close* Summers, especially in fixed camps, or when the men lay wet after a march in warm weather." If we compare the conclusions with which Dr. Hosack terminates his paper, with these lately published by Dr. Barton, of New Orleans, in his "Sanitary Report," we shall find that the "shears of fate" of the latter gentleman, the combination of terrene causes which represent one blade of the shears, and meteoric causes, which represent the other blade, in the production, spread, and virulency of epidemic diseases, were as well known and as clearly expressed fifty years ago as at present. "I have been led to conclude, says Dr. Hosack, "1st. That an impure atmosphere is indispensably necessary to multiply and extend the specific poison, constituting *plague, dysentery, typhus* and *yellow fever*

2ndly. That the impurities of the atmosphere do not produce their effects in the manner suggested by Dr. Chisholm, by increasing the susceptibility of the system to be acted upon by the peculiar virus of those diseases. 3rdly. That, instead of predisposing the body, &c. 4thly. That the impurities of the atmosphere are fermentable materials to be called into action by the specific ferment of those diseases, aided by heat, moisture and calm state of the atmosphere; and that as far as such atmosphere extends, and the circumstances favorable to such fermentative or assimilating process continue, so far those diseases become epidemic, but no further." Dr. Barton concludes—1st. That a close junction and combination of the meteorological and terrene conditions is absolutely indispensable to the origination, transmission and duration of yellow fever every where. 2nd. That the terrene conditions referred to, are controllable and removable by human agency; and, consequently, are separable from the meteorological conditions, at man's option and at man's pleasure, &c., &c.

Dr. Frank Hamilton's Report on deformities after fractures is one which we will return to in some future number. He appears to have treated his subject with great fairness, and if *his* experience in the treatment of fractures is borne out by that of other celebrated Surgeons, deformity is a much more frequent result than the profession at present imagines. His reflections on Surgeons of other countries are entirely uncalled for, and betrays a disposition to attribute improper motives to others, which ill-accords with the character of manly straightforwardness that he evidently aspires to.

From Dr. Trask's Prize Essay we learn, that of 200 cases of *turning* for placenta previa, 141 recovered and 59 died, or *one in three and four-tenths*. Of 50 cases of *spontaneous delivery*, 45 recovered, and 7 died, or *one in seven and one-seventh*. Of 12 cases delivered by *craniotomy*, 11 recovered and 1 died. There were four delivered by forceps; all recovered. In three in whom delivery was "forced," two recovered and one died. In two the fœtus was grasped and brought down; both recovered. Among recoveries after *turning*, *craniotomy*, &c., the hemorrhage, previous to delivery, was so severe as to render the danger very threatening in 84 cases. In sixty-two of the eighty-four, the constitutional symptoms are stated as indicating great danger to life. Among *death* after *turning*, *craniotomy*, &c., the hemorrhage, previous to delivery, was noted as very urgent in 44 cases. Among *recoveries* after *spontaneous delivery*, the hemorrhage had been very great in 16 cases. Among *fatal cases* after *spontaneous delivery*, in five the bleeding was very severe; in two it was apparently moderate. Among the fatal cases after artificial delivery, the proportion of moderate to severe he-

morrhages is 3 in 47. Among the recoveries after spontaneous expulsion of the child there were 20 cases of *partial* presentation of the placenta and 10 cases of *complete* presentation. After *fatal* cases of spontaneous delivery there was 1 case *complete* and 4 cases *partial*. Of the *recoveries* after *artificial delivery*, there were 46 cases of *partial* and 84 *complete*. While of *fatal* cases after *artificial delivery*, there were 12 cases *partial* and 45 cases *complete*.

XLIII.—*A treatise on the structure and use of the spleen*, being one of three unsuccessful essays for the Astley Cooper prize, awarded July 1853, with additional notes and an appendix; containing an *exposé* of the numerous errors in the prize essay. By Edwards Crisp, M.D., late Physician to the Metropolitan Dispensary, Corresponding Member of the Medical Society of Nismes, Corresponding Member of the Society of Natural History of Montreal, &c. London, H. Teape & Son. From the author.

Acting in accordance with the author's own motto *res non verba quæso*, we propose passing over the merits of this production as to its entitlement or not to the prize; and proceed to lay before our readers the principal conclusions deducible from Dr. Crisp's inquiries into the subject of the above named work: merely premising that our readers will find in it much interesting information and rise from its perusal convinced of the author's industry and talents.

"I infer that the spleen is comparatively an unimportant organ in the animal economy.

That one of its offices is that of affording an adequate supply of blood to the stomach, and to act as a reservoir for the blood, when the balance of the general circulation is deranged.

That another of its offices is judging from the beautiful arrangement of the malpighian corpuscles, and the distribution of the arteries upon them, and especially by the action of heat and nitric acid upon these corpuscles, (never, I believe, before noticed), to secrete an albuminous fluid which performs some parts in the process of sanguification.

That in what is called white blood or leucocythemia it is probable that the liver has more to do with the alteration in the blood than the spleen.

That after careful and extensive examinations of the spleen-pulp of *different animals*, I have *failed to detect the blood cells and decomposing* blood cells described by Kolliker.

That the assumption that the coloring matter of the bile is formed by the decomposed blood corpuscles has no accurate foundation.

That the arteries terminate abruptly in the spleen in tufts which surround the mulphigian body and serve for the secretion of its contents.

That from numerous experiments upon rats, mice and birds, I am unable to discover that quinine, the poison of reptiles and noxious agents produce any immediate contraction or special influence upon the spleen.

That, with the exception of the cheiroptera, the spleens of which resemble the rodents, the spleen of an animal examined, will alone tell the class to which it belongs.

That the weight of the animal does not indicate the size of the spleen.

That in fat animals, judging from the examinations of prize sheep, pigs and oxen, the spleen is smaller than in those in tolerable condition."

The Medical Chronicle.

LICET OMNIBUS, LICET NOBIS DIGNITATEM ARTIS MEDICÆ TUERI.

WHAT ARE WE TO DO WITH OUR LUNATICS, DEAF MUTES, AND BLIND?

Canada, say prize essayists, is a great country. And, certainly, when we consider its vast extent of surface; its diversified physical aspect, which, while it pleases the eye of taste, serves the purposes of the merchant, the manufacturer, and the agriculturist; its extensive forests of valuable timber; its untold mineral wealth; its rapid increase in a population whose enterprize is fast developing its resources; its canals, railroads, and other works of public utility, we are constrained to admit the truth of the remark. But looking at it through the lens of philanthropy, weighing it in the balances of humanity, it is an essentially *small* country; one of the smallest, if not actually the most diminutive, of the scale of nations pretending to civilization. Let the stranger from abroad enter our borders and ask the number and size of our institution for God's afflicted; for the bereft of reason, for the sightless, and those whose ear has never heard a sound, and whose tongue has never syllabled a word, and what man, possessing a soul, but would feel the spot of shame burn deeply on his cheek, as he answered, "There is not, in all Canada, an institution for the Deaf and Dumb, not one for the Blind; and for the Insane, we have two small asylums, capable of accommoda-

ting four hundred inmates, but which are now made to hold, by means of some improved packing process, 550 lunatics." And we have not the excuse of ignorance to plead. The census report for 1851-2 establishes the melancholy fact, and proclaims it to the world, that there are in the united provinces close on to three thousand insane, nearly fifteen hundred deaf and dumb, and eight hundred and seventy blind. In Canada West the proportion of those suffering from mental aberration, to the entire population, is as 1 to 891; whilst in Canada East one person out of every 508 of the community is either idiotic or insane. In the former, one individual in every 1991 of the whole population is a deaf mute, and one in every 3012 is blind. In the latter, one in every 1029 is a deaf mute, and one in every 1007 is blind. So that in the entire province, one person in every 368 of the whole population is either lunatic, blind, or a deaf mute. Yet we have no provision made for them, no asylum, no hospital, no school. How long will such a disgraceful and humiliating state of affairs be allowed to remain unimproved? Well may the question which stands at the head of this article be asked of our legislators: What are we to do with our 3000 lunatics, our 1500 deaf mutes, and our 870 blind? Three years ago, by a spasmodic act of humanity, £10,000 were voted by the associated wisdom of Canada, "for the erection of institutions for the Deaf and Dumb and the Blind in Upper and Lower Canada." Whether the "jobbers" of the day thought by so doing they were making some slight return to the country which was tamely submitting to their "fleecing" operations, we know not. This, however, we know,—not one step has been taken by the authorities towards the erection of these much needed establishments. The £10,000 appears in the estimates for the year 1853, and there is an end of the matter. What we have said in a former article with regard to the insane we would now repeat:—monies are voted, and voted freely too, for the furtherance of various objects, but for the cause of the poor lunatic, the cause of him whom an inscrutable Providence has allowed to become the most pitiable and helpless of men, not one penny has been appropriated. Persons who have made insanity the subject of observation must be painfully impressed with the inhumanity of our Legislature, knowing as they do that a large proportion of insane cases, if submitted to proper treatment at an early period, will be restored to their original vigor of mind, but the same cases allowed to be confined and watched over by friends or the *employes* of a common gaol, will certainly result in incurable insanity. It is a question pregnant with sorrowful and distressing reflection, how many of the 2,802 lunatics, at present within the borders of Canada, if properly treated, would be rejoicing in the possession of an unclouded reason, who are now furious maniacs, stolid melancholics, or drivelling idiots.

MEDICINE IN TURKEY.

"Service in the Ottoman army, medical or otherwise, offers no inducements whatever to young Americans. Of actual want, one suffers little, but must submit to humiliating embarrassment; while the society of even the first officers cannot possibly be agreeable to a person who is cultivated or accustomed even to the mere decencies of life. The Turks are slow to perceive merit, and still slower to reward it. The first, and almost the only word of English they learn, is *to-morrow;* and however gentle and urbane the Mussulman may be in private life, he is a paragon of intrigue, and overbearing treatment, in office. Foreigners who enter the Turkish service, appear to adopt permanently their worst peculiarities. It was related to me by an Italian, in the service at Silistria, that Achmet Pasha once caused several of his physicians to be tied up and flogged, in the presence of the troops. We hear much of foreigners in the Ottoman service; but very few of them, surgeons excepted, acquire positions of any importance, in the army. Their connection with the service is nominal, rather than actual.

Mussulmen are averse to surgical operations. Surgery is, in fact, rarely called into requisition in the Turkish camp. During the affair of Kalefat, in which 12,000 Turks perished from cold, fatigue, and sorties against the Russians, and when patient Mussulmen became furious maniacs through extreme suffering, but one grave surgical operation was performed, whereas hundreds of lives might have been saved by judicious management.

Comparatively few Turks practice medicine. The professors of the healing art, in the Orient, are mostly Greek and Italian adventurers, who make the simple Moslems the dupes of their charlatanism. The Imperial license to practice anywhere in the Sultan's dominions, can be obtained for a few piastres. Even those who are employed professionally, in the Seraglio, and penetrate the mysterious harems of Turkish grandees, do not hesitate to administer preparations followed by the most fatal effects. They do indeed profess to teach medicine in the schools attached to the mosques, after the doctrines of Avicenna, Averroes, and other Arab authors, but the practice is founded upon no definite system. The believer in fatality does not fear death; and this is the principal reason why, in times of the plague and cholera, the Turks suffer less than the timid Greeks and Armenians.

The most valuable drugs are to be found in the bazaars, but in consequence of the profound ignorance of the rudiments of chemistry, among the Turks, the pharmaceutical preparations sold in the shops, are gross and inefficacious. Distilled water is the ordinary medium for administering medicines."

The Mussulmen Hakims divide all diseases into two classes—nervous affections of the face, and those of an erysipelatous character; and, secondly, all maladies not included in the above.

Among the Græco-Slaves, as with the Turks, surgery is monopolized by the knights of the razor. The practice of medicine is confined for the most part to magicians and sorcerers. There are no midwives; nature renders them superfluous. The mountaineers have a very efficacious method of treating wounds received in their almost perpetual conflicts. Intermittent fever and dysentery are the prevalent diseases of the climate. As among all uncivilized or half-civilized people, the absence of favorable circumstances causes the premature death of feeble children. Those only who possess vigorous constitutions live to maturity, while their natural strength is increased by a temperate manner of life, especially in mountainous regions. A rapid increase of population is thereby prevented; but those who survive are more healthy and vigorous than the majority in civilized countries. When a person is attacked with any disease, he at once avails himself of the exorcising prayers of his Pope or Priest, and then drinks largely of cold water. Hydropathy has in fact been in vogue for ages with the Græco-Slaves." —*American Medical Monthly.*

McGill College. New Appointment.—The vacancy in the Medical Faculty, caused by the lamented death of Dr. Crawford has been filled up by the appointment of Dr. R. P. Howard to the Professorship of Clinical Medicine. This gentleman being permitted by the Governors of the University to retain the new chair with the former one (*i.e.*, Medical Jurisprudence,) that he has hitherto occupied.

Prizes of the Academy of Medicine, Paris.—The "academic" prize of 1000 francs for the best essay on "the influence of change of locality on tubercular disease, determined by precise facts," was assigned to Dr. Rochard, a naval Surgeon. "Portal's prize" of 1000 francs was divided among three essayists: the subject was goitre. The "Itard" prize of 3,700 francs for the best recent work on practical medicine was given to Vidal for his treatise on venereal diseases, which was reviewed last year in this journal. The "Civreux" prize of 1000 francs, question—"Catalepsy," was divided. The "Capuron" prize of 1000 francs, question—"sudden deaths in the puerperal state" was reserved, the essays being unworthy of recompense. A prize of 1,500 francs was given to Petrequin, the eminent Surgeon of Lyons, for the best memoir on the action of alkaline mineral waters. These prizes were awarded on 11th December, 1855, at the anniversary meeting of the academy.

NEW JOURNALS.

The *Medical Independent* and monthly review of Medicine and Surgery edited by Drs. Goadby, Kane and Robinson, Detroit. We have received the first number of this new periodical, which is intended to be issued monthly. It is an octavo and contains 64 pages. It is neatly got up and illustrated with several wood cuts We have perused it with much pleasure and opine that it will be luable addendum to medical literature. Dr. Henry Goadby, so w and favorably known to many of the Physicians of the chief cities in Canada, by his able researches in minute anatomy and by his great ability as a lecturer on this department of science, has commenced the publication in the above journal of a series of communications "on the links connecting the vegetable and animal kingdoms," which will, in itself, more than amply repay the subscribers for the small outlay of $2 a year. We wish our new exchange a long lived course of prosperity and favor.

The *American Veterinary Journal*, edited by Geo. H. Dadd, M.D. This journal is devoted to the diffusion of veterinary knowledge. It is published at Boston, Mass., monthly, in numbers of 32 pages each, for the low price of $1 per annum, in advance. We have been very favorably impressed with the number we have received and think it deserves an extended patronage.

(To the Editors of the Medical Chronicle.)

Gentlemen,—May I be permitted to ask, through the medium of your valuable journal whether, during the ensuing session (1856-57) of the Medical Faculty, the professorships of Medical Jurisprudence and Clinical Medicine are to continue on the same footing as at present.

Yours, A SUBSCRIBER.

(Our information is confined to the notification above made.—EDS. MED. CH.)

To Correspondents.—Dr. Edmonston and Johnson. It is all right, and the proper acknowledgement will be forwarded.

QUARTERLY REPORT OF THE MONTREAL GENERAL HOSPITAL, ENDING 31ST JANUARY, 1856.

Patients remaining from last Quarter.....	64	Died during Quarter.....	8
Admitted present Quarter....	210	Now in Hospital.....	73
		Discharged.....	193
	274		274

IN-DOOR PATIENTS.		OUT-DOOR PATIENTS.	
Males	108	Males	404
Females	102	Females	427
	210		831

DISEASES AND ACCIDENTS.

Diseases, &c.	Admit.	Died.	Diseases, &c.	Admit.	Died.
Abscessus	2		Hœcolitis	1	
" Cerebri	1	1	Inebritas	2	
Amenorrhœa	1		Laryngitis	1	
Apoplexia	1		Lepra	1	
Bronchitis	3		Luxatio	1	
Bubo	1		Maria	1	
Cardialgia	2		Meningitis	1	1
Caries	2		Morbus Cordis	1	1
Catarrh	2		" Coxæ	1	
Cirrhosis	1		Ophthalmia	19	
Colica Pictonum	1		Paralysis	2	
Contusio	5		Paraplegia	3	
Debilitas	2	1	Paronychia	1	
Diarrhœa	1		Pericarditis	3	
Dysenteria	2		Phlegmon	1	
Dyspepsia	1		Phthisis	6	2
Enteritis	1		Pleuritis	1	
Epilepsia	1		Pleurodynia	4	
Erysipelas	6		Psora	3	
Extravasatio Urinæ	2	1	Rheumatismus	12	
Febris Com. Cont.	32		Scarlatina	1	
" Typhoid	1		Sciatica	2	
" Typhus	1		Scrofulosis	1	
Fistula in ano	1		Structura	1	
" perinæi	1		Subluxatio	2	
Fractura	5		Syphilis	5	
Furunculus	1		Tic Douloureux	1	
Gelatio	5		Tinea Capitis	2	
Gonorrhœa	5		Tumor Maxillæ	1	
Hœmatocele	1		Ulcus	17	
Hœmoptasis	1		Ustus	1	
Hemiplegia	1		Varicella	1	
Hypochondriasis	3		Variola	4	1
Hysteria	4		Vulnus	2	
Icterus	1				

OPERATIONS, &c.

Major.—Excision of superior maxillary, palate, and malar bones; section of perineum.

Fractures and Dislocations Treated—Fractures, 5; Dislocation, 1.

Minor.—Teeth extracted, 84; Abscesses opened, incisions, &c., 57; cupping, 24; Total, 165.

Attending Physicians.—Drs. Crawford and Scott.

ROBERT CRAIK, M.D.,
House Physician and Surgeon.