

litmus, contain sulphuretted hydrogen; those which turn reddened litmus blue, contain alkaline sulphurets. The latter, however, may also contain sulphuretted hydrogen; but, in that case, this compound is combined with the metallic sulphuret, in the state of hydrosulphite of metallic sulphuret. (*Wasserstoffschwefelisches-Schwefelsalz.*)

Besides carbonic acid, sulphuretted hydrogen, and sulphurous acid, mineral waters often contain other gaseous matters such as *oxygen gas* and *nitrogen gas*. In most cases, however, mineral waters contain less of these gases than common spring water. Both oxygen gas and nitrogen gas can be expelled from mineral waters, by long-continued boiling.

Independently of the constituents above-named, mineral waters very often contain *organic matter* in solution. This is the reason that these waters, upon being strongly concentrated by evaporation, become yellowish; and that the dry salts, left by the evaporation, turn black, on being ignited.

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XIII. *Report of Cases treated in the Surgical Wards of the Glasgow Royal Infirmary, from Nov. 1830, till May 1831.*

By ROBERT PERRY, M.D. senior Surgeon, &c.

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THE surgical duties of the Glasgow Royal Infirmary are committed to the care of four surgeons, two senior and two junior, each of whom, till about the year 1826, took them wholly upon himself for a period of three months, the others only attending when called in cases of consultation, or to operations. About the period mentioned, (the number of surgical patients having increased,) it was thought advisable that two surgeons should attend daily, each having the same number of wards, attending the waiting room, and admitting patients, week about, their period of attendance being extended to six months. This was a decided improvement upon the former system, giving the surgical attendants more time, to witness the result of any plan of treatment they might think proper to adopt.

In 1829, a law was passed, making it imperative upon the attending senior and junior surgeons, to give clinical lectures upon the cases under their care during the winter, and their period of attendance was extended to twelve months; the two surgeons who are elected in August attending only the consultations and operations till next May, when they commence their daily attendance, and continue till the ensuing May, when they give place to their successors, continuing to act as consulting surgeons till 1st November, when they cease to have any thing

farther to do with the hospital, and cannot be re-elected for the two following years.

This was a still farther improvement; it is a plan of attendance highly liberal, conducive to the interests of the Infirmary, which it extends among the profession—useful to the profession itself, as it excites emulation amongst its members—diffuses more widely surgical knowledge—gives to the student, who must see the house for two years, an opportunity of witnessing a greater variety of surgical treatment; and prevents all the evils of the close or monopolizing system. And its good effects are apparent; for it may, without vanity, be affirmed, that in no city in the kingdom, is surgery more ardently studied, or more successfully practised, than in Glasgow.

For the first twenty years after the commencement of the Glasgow Royal Infirmary, a similar system prevailed in the election of the Physicians or *medical* attendants, who, after having served for two years, retired, and were not again re-elected for two years, if others could be found to fill the situation; but the medical attendants being confined to what are called *pure physicians* who act as consulting physicians, that is, Doctors in Medicine who never acted as general practitioners, or, who having done so, or attempted to do so and failed, had given up the surgical or obstetrical department of the profession; or what amounted to much the same thing, if this had left them, they became pure physicians, and were considered eligible to serve as physicians to the hospital, while the general practitioner, whose every day business it is to attend to all cases of disease, and who, of course, enjoys a more extensive opportunity of acquiring practical knowledge and experience, was excluded.

It is understood, that the present enlightened managers are about to put an end to this close system, and it may therefore be expected that an attempt will be made to set up the cry, that “the profession is in danger,” and “that nothing but ruin and revolution may be expected to follow such a rash and violent innovation;” that it is a blow aimed at the existence of the *genuine* physicians, “calculated to level all distinctions in rank,” and uproot established privileges, hallowed by time; that it is an “unwarrantable interference with vested rights,” “contrary to the constitution, and the practice established by experience;” that it is an audacious attack upon a system which has hitherto “worked well;” that “it is, in fact, not reform, but revolution,” and can be looked at in no other light, “than rapacity and robbery on the part of the general practitioners,” and a change which, by letting in a host of unqualified persons to act as medical attendants in the hospital, must be followed

by the utter ruin of the profession, and of the best interests of the Infirmary.

The Directors will no doubt answer all this, by asserting, that by the original charter of the Royal Infirmary, they are not restricted in their elections to *pure physicians*, but only to those they consider best qualified to fill the situation; that they believe that the education of the M.D.'s who act as general practitioners, is at least equal to that of those who act only as physicians, and that from their being daily in the habit of attending to every variety of medical practice, they must have at least equal, if not superior knowledge, and experience of diseases, to those who are only called to visit and consult in extreme cases, chiefly with a view to satisfy those who are still so much under the influence of prejudices, as to suppose that there is a charm attached to the term physician, which gives those who assume it a kind of second sight; but that such notions are now confined to an antiquated race, "are contrary to the spirit of the age," and must soon disappear before the "light of liberalism" and the "march of intellect;" and that they, the managers, are quite capable of forming regulations, by which those without experience will be prevented from getting into the situation of medical attendants of the hospital.

It has been asserted, and lamented over, that our students during their attendance at the hospital, devote themselves wholly to surgery, and pay no attention to medicine, so called, of which they are said to be entirely ignorant. The accusation is groundless. While attending to surgery they are learning in the surest and best manner, the practice and principles of medicine; they are learning to reason from the things which are seen, to the things which are not seen; to watch the progress of inflammation and change of structure in those different textures, which are obvious to the senses. In fact, they study their profession in the surgical wards, not by witnessing lots of medicines prescribed for the removal of this and that symptom, the causes of which are but imperfectly guessed at; but by the Baconian method of induction, by which they become acquainted with the functions and morbid changes of the different parts of the body; and this the attentive and intelligent portion of the students, perfectly understand, as I saw well illustrated last winter, by the great attention they paid, and intense interest they felt, in the instructive case of Bulloch, to be afterwards narrated.

Who, I may be permitted to ask, have been of late years the great improvers of Medicine? Not certainly those who assume the title of *genuine Physicians*, who since the days of

Sydenham, may be said to have been stationary, but the general Practitioners; the *Hunters*, the *Clines*, the *Abernethys*, *Coopers*, and *Lawrences*. The army and hospital surgeons, also, who, disregarding nosological arrangements, have founded their practice upon their knowledge of the laws of the animal economy. To come nearer home: what, since the foundation of our Hospital, has been done by the *genuine* Physicians for the advancement of Medical Science? Their minds have never been distracted by Surgery, or surgical operations;— “their whole attention having been directed to the study of those maladies that they have ever reckoned their particular province.” Yet, where are the records of their improvements to be found? Alas! they are buried!

On entering upon my duties on the 1st May, 1830, there were in the wards,

The accidents, many of them very severe, the patients only surviving—  
a short time after admission, amounted to . . . . . 145  
Of these 57 were fractures. And what is much to be lamented, many of  
them occasioned by the abuse of ardent spirits.

*The following table exhibits a list of the Deaths and causes, when these could be ascertained by post mortem inspections.*

The six following were patients in the house before 1st May, 1830:

1. P. R.—Tetanus from scald. Inflammation of nerves leading from seat of injury, and slight extravasation on posterior part of brain.
  2. P. G.—Psoas abscess. Diseased vertebrae.
  3. W. C.—Lumbar abscess. Extensive disease of the bones of pelvis, and conversion of psoas muscles into substance resembling adipocire. (Was a patient in the house for nearly 18 months.)

4. J. C.—Gangrene of toes, from old age. The arteries of the limb found extensively ossified.  
 5. J. S.—Morbus coxarius. Caries of the bones of pelvis, and head and neck of thigh bone.  
 6. R. T.—Phthisis after amputation of arm.

**MALES.**

1. B. C.—Concussion. Laceration, and extravasation of blood on brain.
  2. J. D.—Fracture of leg, erysipelas, and effusion of water into brain.
  3. Wm. T.—Painful swelling of glands of neck, with cough. Tubercles in lungs.
  4. J. S.—Compression. Fracture of base of skull, and extravasation of blood on brain.
  5. R. M'H.—Burn from clothes catching fire. Died four hours after admission. Effusion of blood under tunica arachnoidea.
  6. Wm. F.—Lacerated wound of fingers—tetanus. Inflammation of nerves leading from seat of injury.
  7. H. W. aged 78.—Calculus vesicæ, exhaustion. Bladder much diseased, containing a stone the size of a pigeon's egg, with six small ones the size of peas. No operation.
  8. W. A.—Fracture of humerus and femur, concussion of brain. No inspection.
  9. J. F.—Injury of spine, paralysis of lower extremities and bladder. Spine fractured, and spinal marrow partially lacerated.
  10. E. B.—Compound fracture of leg, loss of blood from gangrene of femoral artery, at top of thigh. (See case detailed.)
  11. J. N.—Severe burn. Died day after admission.
  12. H. D.—Affection of hip joint, and typhus. No inspection.
  13. Wm. M.—Stricture of rectum. Cancerous thickening, and ulceration of gut.
  14. A. R.—Tumors, sarcomatous.
  15. A. J. Sinuses in perineum, gangrène of scrotum, &c.
  16. J. L.—Compound comminuted fracture of left leg, and toes of right foot, with comminuted fracture of rib. Amputation. (See case.)

## FEMALES.

1. M. F.—Fracture of leg, laceration of thigh and wounds of head, with concussion of brain, ending in Dysentery, Inflammation, and ulceration of colon and rectum.
  2. A. P.—Tumor of mamma. Inflammation of stomach, and ulceration of inner coat of colon.
  3. M. F.—Extensive scald, gangrene.
  4. S. P.—Erysipelas. No inspection.
  5. M. C.—Burn from clothes catching fire.
  6. M. Y.—Burn from clothes catching fire.

Deaths of Males	21
— Females	6
Total	27

The number of operations performed, during my attendance, from 1st May, 1830, till 1st January, 1831, was formerly mentioned, as amounting to . . . . .  
From 1st January, 1831, to 1st May, 1831.

Viz. Lithotomy	2
Amputation above knee	22
Do. below knee	22

Excision of scirrrous tumour	.	.	.	.	.	.	1
Do. do. lip	.	.	.	.	.	.	1
Do. of extensive contraction from burn	.	.	.	.	.	.	1
Amputation of fingers	.	.	.	.	.	.	3
Fistula in ano	.	.	.	.	.	.	2
Strangulated femoral hernia, reduced by taxis	.	.	.	.	.	.	1
Do. inguinal hernia, reduced	.	.	.	.	.	.	1
Dislocation of shoulder, reduced	.	.	.	.	.	.	1
Hydrocele by injection	.	.	.	.	.	.	1
<hr/>							
Total,	.	.	.	.	.	.	18
Deaths after Amputation	.	.	.	.	.	.	1

As already mentioned, many of the accidents were severe, and soon ended in death. The first class which may be noticed, are *injuries of the head*, of which there were five severe cases.

*19th May*, B. C., labourer. At five P. M., when in a state of inebriety, fell from the top of a stair ten feet high; when raised was quite insensible, and blood issued from right ear. When admitted next day, lay in a comatose state, and when roused or spoken to in a loud voice, only made some *indistinct murmurs*. Eyes turgid and pupils slightly dilated, and sluggish. *Breathing natural*. Pulse 92, of moderate strength. Seemed sensible to external impressions. No external injury of skull can be detected. *Was bled* previous to admission.

The head was shaved, cold lotions applied, and afterwards leeches. The bowels were freely emptied. He lay in the state described almost without change, till the 22d, when he expired, the fourth day after the accident.

*Inspection.* Over both hemispheres of the brain, beneath the dura mater, and at the base of the skull there existed a large quantity of coagulated blood. The brain was more vascular than natural. The anterior and left middle lobes were extensively and deeply lacerated, the torn parts filled with coagulated blood, and the medullary substance around this of the consistence of pulp. Several ounces of serum beneath the cerebellum, and a little in the lateral ventricles. The squamous portion of the temporal bone and greater wing of the sphenoid, were fractured horizontally, while another fracture took a direction along the petrous portion and sella turcica.

*Case 2d, June 6th.* John S., aged 35, lies in a state of general insensibility from which he cannot be roused. Breathing stertorous. Pupils, particularly the right, dilated and immovable. Blood issues from right ear and nostrils. Extremities cold. Pulse 66, weak and irregular. Above superior posterior angle of right parietal bone, is a firm swelling

about the size of half-a-crown; and at outer canthus of both orbits are small puffy tumours. No fracture detected.

This morning was knocked down by a blow from a fist, and fell on right side of body on pavement. When raised, was insensible, in which state he has since remained. Before admission, was visited by a surgeon, and bled. Died 14 hours after receipt of accident.

*Inspection.* Skull found fractured below tumour on right side of head. Fracture extended from about the centre of the impression made by temporal muscle on parietal bone, to the middle of the squamous portion of the temporal bone, where it divided, one division going downwards and backwards to the middle part of the mastoid process, when it then ran forwards to the meatus auditorius externus; the other division of the fracture ran forwards and inwards, to foramen lacerum anterius. A portion of the parietal bone was comminuted and slightly depressed. The walls of the cranium, particularly the right parietal bone, were unusually thin, not half the thickness of an ordinary skull, and, when examined by the light, unusually diaphanous. Betwixt the parietal bone and dura mater, was a layer of coagulated blood, occupying a space of four inches square; the middle artery of the dura mater was ruptured, and a layer of blood effused betwixt the dura mater and tunica arachnoidea, covering the whole of the right hemisphere and a portion of left; about half an ounce at base of brain. The substance of the brain was healthy.

*Case 3d, James Corbett, aet. 25. June 9th.* This morning about four o'clock, was found lying in a state of stupor below a working steam engine. At seven A. M., three hours after accident, was brought into this house. Scalp on right side of head, extending from middle of superior part of temporal bone to about same part of occiput, is separated from muscles, so as to form a semicircular flap of about two inches deep. Skull is fractured, apparently about posterior inferior angle of parietal bone of this side, but not depressed. The fracture, which is two lines broad, seems to extend over crown of head, and downwards under right temporal muscle. Immediately over left temple is a puffy swelling, and under it, apparent depression of the bone. Left eyelids are much ecchymosed; left clavicle is fractured at middle; on posterior lateral part of right side of chest, is a severe lacerated wound about four inches in length, transversely dividing integuments and muscles down to ribs. Lies in a stupid state, but can be easily roused from it, and

when so, is incoherent, and can give no distinct answer when questioned. Right pupil is dilated, but sensible to light. The state of left cannot be ascertained from ecchymosis of eyelids. Breathing natural. Has had no vomiting. Pulse 96, soft. Has bled a good deal from the wounds.

A consultation met at a quarter before nine, when it was resolved to trace the fracture further, and to puncture swelling over left temple, to ascertain the state of the bone. Accordingly right temporal muscle was divided to about the extent of an inch, when fracture was found extending to base of skull. Through a puncture made in tumour of left side, bone was thought to be depressed. In this state of things, and as no symptoms of compression were present, it was not thought fit to have recourse to any active measure. At two, p. m., the consultation held the same opinion, no change having taken place on the symptoms. Had on admission a purging enema.

10th. Has made water freely. Heat of skin natural, pupils less dilated, and he appears more sensible; a good deal of thirst; rather restless, and strait jacket applied; to have *gr. x. calomel. Adhib. Hir. xij. cap. et ft. venesectio si opus.*

11th. Two stools from calomel and senna, and three from drop of croton oil at half-past nine, last night. Pulse at present 78, this morning about 60, and soft. Little pain in head. Is more sensible. Tongue white. No throbbing of carotid, or flushing of face. *Cont. lot. frig. cap. Mitt. sang. ad 3xij. si opus.*

12th. A drop of croton oil this morning has produced two stools. Says his head is easy; was restless during the night. Pulse 48. Skin and pupils natural. Did not require bleeding. Appears more collected. *Cont. lot. cap.*

13th. Continues nearly free from pain. Slept well. Thirst less. Countenance more natural. Mind calm and sensible. Pulse 48. Tongue white. Three stools. Wound on side suppurating kindly. *Cont.*

14th and 15th. Rather improved, but complains a little of his breast and head. Puffy tumour on left temple gone, and no appearance of depression. Wound on scalp suppurating. Pulse 64, soft and regular. One stool from drop of croton oil. Regularly gets out of bed when he voids urine.

18th. Scalp adhering, and the edges separated for about half an inch, leaving a space of the bone bare about the size of a shilling. Pulse 80. Apparently improving. One stool. *Rep. Pil.*

19th. Continues free from pain. Sleeps well. Pulse 68. Apparently better. Two stools. *Cont. Pil.*

The patient refused to take the medicines prescribed, and left the hospital, his mind somewhat irritable. About two months after, the portion of bone uncovered by the scalp exfoliated, leaving a space fully the size of a shilling, where the pulsations of the brain were distinctly seen; he came back at this time to the hospital, in good health, and acknowledged that at the time he left it, he was not fully sensible of what he was doing.

It is only necessary to place these cases in contrast, to make them interesting, as showing the difference betwixt compression of the brain and concussion. The first is a well marked case of concussion, joined with a certain degree of compression. The second a case of pure compression, and the third a case of pure concussion, though from the manner the blow appears to have been received, and the extensive fracture, compression might have been expected to exist. The last case shows, also, how little medical or surgical interference is necessary, when the constitution is otherwise good,—here nothing was done except keeping the bowels open, and watching carefully the first appearance of inflammatory symptoms, to act vigorously. This was fortunately not necessary.

It may be further remarked that, in the first case, the absence of the stertorous breathing, the regularity and moderate state of the pulse, the ability, to a certain extent, to use the voluntary muscles, without the power of directing them to any object, and the excitability of the involuntary muscles, might have led to the belief that the case was one of concussion; but the blood issuing from the ear, the loss of speech and of mind, indicated, along with this, either extravasation or serious injury of the brain, which was illustrated by the post mortem examination. While, in the second case, the complete insensibility to external impressions, the stertorous breathing, dilated pupils, irregular pulse, and coldness of the extremities, with the blood issuing from the ear, all immediately following the injury, indicated complete compression of the brain, and consequently the nearly total suspension of the action, of both voluntary and involuntary muscles. In the 3d case, though the patient lay for some days in a stupid state, he could easily be roused. Though incoherent, the action of the voluntary and involuntary muscles was perfect, as shown by his exertions, and his getting out of bed when he felt the inclination to void urine.

It will be remarked, that in the two first cases, the patients had been bled previous to admission, immediately after the receipt of the injury. This practice cannot be too severely

reprobated, as there is no doubt, that in many cases, it has the effect of sinking the patient irrecoverably. It is true, that in the cases detailed, nothing could have saved the patients, but it might have been otherwise. In the third case, this practice might have been followed by serious consequences.

*Fractures.* In the absence of the surgeon, it is the duty of his clerk, who resides in the house, and must be always in attendance during his week of admitting cases, to take charge of all the accidents brought into the hospital, to adjust and bandage the fractured limbs, dress the wounds, burns, &c. So that, except when the patient happens to be brought in immediately before or at the visiting hour, when the surgeon examines and prescribes, he has seldom an opportunity of seeing the simple cases before they are put up by the clerk; when the case, in the opinion of the clerk, is doubtful, or requires an immediate operation, the surgeon is informed of it, and if a consultation is required, all the surgeons belonging to the hospital, are summoned at any hour of the day or night, the case may be admitted.

It is evident from this, that much responsibility rests upon the clerks appointed to the surgical wards of the Infirmary, their duties requiring experience, sound judgment, and unremitting attention. It gives me pleasure to say, that in my clerk, Mr. A. Ure, I found these qualities combined, and all the cases of fracture put up by him, with the exception of one I am about to relate, succeeded to a wish. This case is important, as it illustrates how much may be done by art to ward off the fatal result, even where the constitution is previously worn out, as well as other points of surgical practice, which, as the case is given at length, as extracted from the Journal of the hospital, requires from me no farther comments.

Edward Bulloch, æt. 50, Calton, a pensioner and labourer. Nov. 26, 8 p.m. This afternoon, while unloading a cart, a large stone, weighing from 2 to 3 cwt., fell against the back of his left leg, and impacted it between another stone. Tibia thus received a compound comminuted fracture at its upper third; near the fractured part is a small wound which has occasioned slight haemorrhage.

On admission he was shivering, and shortly after a febrile accession came on with full throbbing pulse, general heat of skin, and restlessness. Says that his habits are tolerably sober, and that his general health is good—his legs, however, present the cicatrices of ulcers; has been 25 years in the army, great part of the time abroad. A lint compress and roller were applied—after which cold lotion. *Mist. emetico-cathartic.*

28th. Swelling and erysipelatous redness having increased, leeches were twice applied. Pulse 100, rather sharp; tongue white, but moist; bowels open from mixture. *Cont. Medic.*

30th. Dark erysipelatous redness has extended along whole of fore and inner part of thigh, as far as abdomen, with emphysema to mid-thigh—sanious discharge from the wound, mixed with air—lower part of leg slightly swelled, but natural in colour. Pulse 110, weak; tongue moist, and clean; appears collected. *Vin. Rub. ʒi. o. h. Sulph. Quin. grii. 2d. qq. h. Sumat stat. et repr. post. hor. V. opii. griii.*

Dec. 1st. Medicines continued. Pulse 120, stronger; tongue moist and clean. Had 6 gr. calomel last night, from which one stool; redness and œdema have extended as high as spine of ilium, and emphysema to bend of thigh; great discharge of grumous matter mixed with air from opening; skin icteroid; urine high coloured; leg not more affected. *Cont omnia. Sp. camph. pro lotion.*

3d. In addition to wine, had 5 oz. brandy in toddy; pulse 120, very firm; œdema abated; much matter pressed from upper part; swelling of leg below the opening increased; tongue dry; thirst; slept well; no stool. *Calomel grvi. Cont. alia.*

4th. Swelling of thigh and abdomen less; less yellow tinge of skin; sanious discharge now mixed with some purulent matter; less air pressed out; pulse 100, firm; much thirst. *Table beer and porter to drink. Pil. calomel grij. c. op. gri. Cont. alia.*

5th. Swelling of thigh still farther diminished, and colour more natural. Pulse 108, firm; tongue dry; thirst continues; less sanious discharge from wound. Three stools. *Cont. omnia.*

6th. A good night. Thigh resumed nearly its natural appearance, and colour of skin greatly improved; considerable quantity of purulent matter can be pressed down from inner and lower part of thigh. Camphor. sp. and bandages to be renewed. *Cont. alia.*

7th. Slept well; heat of skin increased; pulse 116, firm; thinks pain of thigh less; matter more purulent. Brandy toddy omitted last night, when his pulse rose. *Cont. alia.*

9th. Has continued nearly as at last report; a small abscess has formed at upper part of thigh, which was opened and gave exit to 3 oz. purulent thin fluid, mixed with air; much discharge from below knee, where bone is bare. Several stools; pulse 100; tongue moist and clean; less thirst. *Cont. Scultetus' bandage applied.*

11th. Abscess at upper part of thigh, of a dark gangrenous

appearance around edges; considerable emphysema; cellular substance sloughing, but matter discharged of a more purulent appearance; matter from opening below knee less in quantity, and more purulent; swelling greatly reduced; pulse 100, firm; tongue moist and clean; several stools. *Cont. om.*

13th. A good night; jaundice hue nearly gone; little alteration on leg; pulse 104, weaker; tongue moist and clean. *Cont. omnia.* *Rep. Sp. Vin. Gallic.*

14th. Spot at top of thigh rather enlarged, but as yet confined to skin and cellular substance; sanguous matter of a very dark and offensive kind, pressed from under knee; that from under fascia of a purulent character; pulse 108, firm; face a little flushed; more thirst during the morning; three stools. *Cont.*

17th. Leg was this morning laid on the inclined plane, and made firm with side cushions and bandages; two small portions of the comminuted bone have been removed; the matter pressed from under the fascia now wholly purulent; gangrenous spot at top of thigh discharging healthy pus, and portions of loose cellular substance; edges of wound, at site of fracture, have assumed a more healthy appearance; pulse 106, firm. *Cont.*

19th. The dark sloughy portions have now separated completely from the edges of sores upon leg, as well as upon top of thigh; bowels regular; sleeps well. *Cont. omnia.*

20th. Swelling of thigh gone; considerable quantity of pus from under skin at upper part; extent of sore, from which slough separated, size of a crown piece; similar healthy pus discharging from original wound, which is now a sore three inches in diameter, with the bones exposed; one upon middle of inner side of leg nearly of same size; pulse 106, of good strength; tongue clean and moist; bowels easy; appearance and colour of skin natural. *Cont. omnia.*

21st. Still a good deal of purulent matter from thigh; all the sores healthy; pulse 112; skin moist; tongue clean. *Sulph. Quin. diminished one-half.*

23d. A consultation called; leg was removed above knee, by double flap; 6 or 8 ozs. blood lost during the operation, after which he continued weak and tremulous, though supplied liberally with wine; had 3*i.* Tk. Opii. with Sol. Carb. Am. in the evening; rested well during night; pulse 120, rather weak; has had 10 oz. whisky in toddy. *Cont. om.*

24th. Last night had calomel and opium, two grains of each; wine and toddy *ad libitum*; slept pretty well; expresses a desire for food; sore at upper part of thigh, which had assumed a dark sloughy appearance, again secreting purulent matter; pulse 120, weak; tongue clean, but dry; feels to-day

more comfortable; bowels slow since operation. *Hab. st. nem. domest. Rep. Pil. Cont. alia.*

25th. Slept well; appears improving; pulse 100, firmer; tongue moist: heat of skin natural; bowels easy. *Arrow root with wine. Cont. alia, quibus addantur Sp. Hordei ʒviii.*

26th. To-day the stump was undressed, and found in greater part adherent; healthy pus discharging from sore on thigh; pulse much firmer; appetite increased; tongue clean; no stool. *Hab. st. nem. domest. Omit. Pil. Cont. alia.*

27th. Pulse 112; tongue moist; perspiring much; stump easy; two stools. *Cont. omnia. Lot. evap. c. Sp. Camph. Acid. Sulph. Arom. gutt. xv. quater in dies.*

29th. Bandages unloosed, and a considerable portion of the face of the stump found in a state of gangrene; sore at the upper part of thigh, at its inner edge, also of a dark appearance; at present a copious perspiration all over the body; tongue moist, but of a dark brown appearance; pulse 120, weak; appetite rather fallen off. *Cont. vin. et Sulph. Quin. Hab. Opii. gri. 3<sup>ta</sup>. q. q. h. Catap. c. Vin. Rub.*

30th. Whisky substituted last night for wine in poultice; had, in addition to other medicines, 1 oz. *Mist. Carb. Ammon.* every hour. Gangrene has not spread, and there is some appearance of suppuration round edge of wound; pulse 104, weak; skin moist; appearance of countenance improved. *Cont. omnia.*

31st. Pulse 112, firmer; a line of separation from the gangrenous portion on the inner side of the stump is apparent, and purulent matter begins to be secreted; considerable discharge from wound on upper part of thigh, the integuments covering the large vessels being completely undermined; appetite very deficient. *Cont. omnia.*

Jan. 2d. Gangrene stopped, and the stump has assumed a more healthy appearance; well-formed pus again discharged from the sore on the upper part of the thigh; appetite a little improved; tongue furred, but moist; pulse 116, firmer. *Opium gri. 2<sup>da</sup>. qq. h. Vesp. enema dom. Cont. alia.*

3d. Had a rigor this morning; complains much of weakness, though pulse not less firm; no appetite; tongue moist, but furred in centre; healthy pus issues from stump; *Ol. Ric. ʒss; toddy with nutmeg. Cont. alia.*

6th. General health and appetite improved; still some sloughing at upper part of stump, with hardness of inner edge; from other parts healthy pus issues; pulse firmer. *Cont. omnia.*

8th. About midnight an alarm was given from patient

complaining of a feeling of wet about his thighs. On immediately removing the bed-clothes, it was seen, that arterial haemorrhage had proceeded to a considerable extent from beneath the lower part of the inner margin of the sore on the upper part of the thigh. A sponge, compress, and tourniquet were applied, which stopped the flow of blood. The pulse had become almost imperceptible; the extremities cold, with extreme prostration of strength. Sulphuric ether, whisky, and wine were administered in large and repeated doses, and warm flannel swathes applied. He sunk, however, and died in less than half an hour from the time that the haemorrhage was discovered.

- *Inspection 36 hours after death.* On dissecting back the superficial integuments from the superior anterior part of the left thigh, the portion of fascia extending from the pectineus and adductor muscles on the one hand, to the sartorius, iliacus and rectus on the other, for upwards of two inches longitudinally, presented a dark green appearance, softened and corroded in the course of the femoral vessels, where it communicated externally with the sore at the upper part of the sartorius muscle, described above. On pressure there exuded from beneath, a quantity of dark grumous matter, of a pulaceous consistence, and possessing an offensive gangrenous foetor; on clearing this away, and raising up the fascia, which, from its sphacelated state at this part was readily accomplished by the finger, and finally exposing the femoral artery, an aperture the size of a split pea, with soft and ragged edges, was detected in its outer side, about an inch and a half below the giving off the profunda, which, in the present instance, was about two inches below Poupart's ligament. The contiguous portions of the pectineus, iliacus, and sartorius muscles, were dark and softened through half their extent. On examining the stump, a deep gangrenous sloughy cavity, extending up between the bone and muscles at its inferior posterior aspect, capable of admitting four fingers, presented itself. Healthy muscular adhesions at anterior portion of bone. Thorax healthy, with the exception of some old pleuritic adhesions; viscera of abdomen natural.

It will be seen from the report, that the quantity of wine and other stimuli exhibited in this case was unusually great. From the 30th November till 20th December, he had 24 oz. of wine daily, with 24 grains of sulph. quin. besides brandy-toddy, opium at night, and porter *ad libitum*, for drink, when thirsty. On 29th December, he had, in addition to the wine, a grain of opium every third hour, without any perceptible

mental excitation; he appeared to be naturally of a dull and peevish disposition, his stomach never rejected the wine or quinine, but he soon tired of the porter and whisky-toddy. Even had the artery not given way, it is doubtful if he would ultimately have recovered.

To the non-medical managers of the Infirmary, this may appear too expensive a mode of treatment for a public charity; but had the hopes of recovery been even less than they were in this case, the practice, as showing to the student the effects of stimuli in retarding or subduing gangrene, was justifiable.

*Immediate Amputation after Injuries.* In cases of compound fracture, or extensive laceration of limbs, where the patient is much sunk with the shock, it often becomes a question requiring both skill and decision on the part of the surgeon, whether immediate amputation should be had recourse to, or that he should wait to see if reaction will take place. If amputation be necessary, and is not forbid by the existence of some other injury that may be supposed to be fatal, I would be much inclined to recommend immediate amputation; as in such cases we may wait for a reaction which will never take place. The extensive laceration and bruising, accompanied perhaps with bleeding, keep up the pain and irritation, as well mental as bodily, which still farther exhausts the patient—an irritation which may after all be speedily removed, by the immediate amputation of the lacerated limb. The two following cases illustrate the practice which I am disposed to adopt, under such circumstances.

James Cullen, aged 35, 30th March, half-past nine P.M. Half an hour before admission was engaged removing a tree from a cart, which slipped over the wheel and struck him with the edge of its thickest end on right leg.

There is great bruising and laceration of integuments above instep, where a broad wound presents itself, extending obliquely from a little above outer ankle, nearly seven inches upwards, and about four inches transversely; there is considerable laceration of neighbouring soft parts. About three inches above instep there is an abrupt projection of shaft of tibia, which is much shattered; fibula is also fractured; lost a good deal of blood by oozing; limb cold, with some emphysema inferiorly; pulse feeble; and features sunk; general health previously good. A consultation being instantly called, it was agreed that the limb should be immediately amputated below knee, which was done. He bore the operation well, though previously much sunk, and revived immediately after the operation, declaring himself

greatly better before he left the operation table. Both tibia and fibula were found minutely comminuted, and the soft parts lacerated to within four inches of knee.

The patient ultimately did well.

April 11. James Laughlin, æt. 50. An hour before admission, left leg and toes of right foot were crushed on a railway by seven loaded waggons passing over him.

Integuments are completely torn away from front of leg down to foot, exposing the deep seated parts which are severely bruised and lacerated, along the bones; tibia and fibula are fractured and comminuted at their lower third; and the muscles are nearly torn across, leaving the lower portion of the leg and foot attached by a flap, consisting for the most part, of the deep seated muscles on back part of leg; all the bones of the tarsus and metatarsus are comminuted. Integuments of toes on right foot are lacerated, and the phalanges of the four greater toes comminuted. Is said to have lost much blood; is sunk and oppressed; has had frequent vomiting; countenance pale; skin cold; pulse feeble. Some apparent incoherence. A consultation being instantly called at half-past 3 p. m., it was agreed that the limb should be taken off immediately, above the knee, which was accordingly done, by the double flap operation. He stood the operation well, although the pulse was so feeble that it could not be numbered, revived after the operation, and in the evening was more cheerful, when the great toe and the three adjoining toes were removed, at their metatarsal articulations. Says the former operation was nothing compared with this. Complains of pain and nausea at stomach. *To have two grains of opium.*

12th. Appears much revived; pulse 120, weak; heat of skin natural; tongue clean; passed a very restless night; complains much of pain about stomach and chest. *Sumat. stat. Bol. Com.*

13th. This morning began to sink without any obvious cause; vomits every thing he takes; pulse so weak as not to be numbered; tongue pale; incoherent; to have brandy, *ad libitum*. Died at five next morning.

*Inspection.* On opening the chest, the lungs and heart appeared natural. On removing the left lung, some soft adhesions were observed at its inferior posterior part, and about ten ounces of a reddish coloured sero-purulent fluid was effused into the cavity of the left pleura. The ninth rib was found to have sustained a comminuted fracture, at the distance of an inch from its vertebral connexion. The pleura costalis, for the space of two inches, was thickened, softened, and of a

deep red hue; the fluid in the stomach was dark and grumous. No other morbid appearances could be detected.

More cases of a similar nature might be brought forward. On the other hand, I have seen cases where the patients were even less sunk than the last, and not more so than the first, allowed to remain in the hope that reaction might take place; in place of which, they continued to sink till death put a period to their sufferings, as would have been the case with Laughlin in a very few hours. It may be mentioned, that the patients were liberally supplied with wine and spirits, with a view to excite reaction; but the knife proved the best stimulus.

*Calculi in Bladder.* The cases of stone in the bladder which came under my care, amounted to eight. The lateral operation was performed with success upon six of them; one would not submit to the operation, and left the hospital relieved. The other, the old man mentioned in the report as having died, was admitted at the time Mr. Costello was in Glasgow, being the only patient which at that time could be got in this district, labouring under the disease. From the sunk state of the patient, Mr. Costello very properly declined interfering with the case. I am inclined to think that out of the eight cases there were only two where lithotripsy could have been tried with any prospect of success; and, from the excessive irritability of the patients, the utmost difficulty would have been experienced in getting them to submit to a second trial of the instrument. One of the cases has been detailed in a preceding number of this journal. Another case worthy of notice was that of a boy, eleven years of age, who had laboured under symptoms of stone for upwards of two years, and had been confined to bed for five months. On cutting into the bladder, the stone was found to be of a large size, and firmly adherent to that viscus. At first it appeared to fill the whole bladder, but on insinuating the finger between the stone and the bladder on the anterior and right side, it was found that a pouch had formed, in which the urine collected. The stone was of a soft friable texture, and, from its size and softness, could not be removed entire. It was firmly adherent to the bladder, so that when the finger was attempted to be introduced betwixt them, it was with great difficulty the separation could be made. It gave the sensation of tearing, something similar to the feeling experienced when separating a firmly adherent placenta from the uterus, and required equal caution. After separation, the bladder felt rough and covered with gritty particles of sand; they were cautiously rubbed off with the finger, and the bladder washed

with tepid water. The stone weighed three ounces. He left the house within a month, much better in health, and is now running about, quite free from complaint.

Besides these, another little boy appeared at the waiting-room, from whom I extracted a stone from the urethra. The number of stone cases was unusually great, making in all nine cases, besides those under the care of my colleague,—an account of which will probably be given by him in his report.

*XIV. Report of Diseases among the Poor of Glasgow, during February, March, and April, 1831.* By JOHN STIRLING, Member of the Faculty of Physicians and Surgeons, and Surgeon to the North-West District.

DISEASES.	No. of Cases.	Sent to Infirmary.	Dead.	DISEASES.	No. of Cases.	Sent to Infirmary.	Dead.
Abortion . . . .	2			Brought forward, . . . .	538	12	10
Abscess . . . .	24	2		Fever . . . .	264	58	17
of lachrymal sac . . . .	1			intermittent . . . .	2		
lumbar . . . .	1			puerperal . . . .	1		
Amenorrhœa . . . .	7			remittent . . . .	2		
Amaurosis . . . .	3			Fistula in ano . . . .	1	1	
Anasarca . . . .	25	5	1	Fracture . . . .	12	1	
Ankle, injury of . . . .	1			Furunculus . . . .	1		
dislocation of . . . .	1			Gastritis . . . .	6		2
Anthrax . . . .	1			Gonorrhœa . . . .	4		
Apoplexy . . . .	2			Gum boil . . . .	1		
Ascites . . . .	9			Hæmoptysis . . . .	5		
Asthma . . . .	33	1		Hæmorrhoids . . . .	9		
Bronchitis . . . .	84	1	4	Heart, disease of . . . .	3		1
Bruise . . . .	37	2		Hepatitis . . . .	10		2
Burn . . . .	12	1		Hernia . . . .	9	1	
Cancer . . . .	2			Hydrocephalus . . . .	4		2
Caries of orbit . . . .	1			Hydrops ovarii . . . .	1		
Cancrum oris . . . .	2			Hysteria . . . .	52	2	
Convulsio, puerperal. . . .	1			Icterus . . . .	2		
Catarrhus . . . .	59			Joint, disease of . . . .	5	1	
Cephalgia . . . .	13			Iritis . . . .	1		
Chilblains . . . .	4			Knee, injury of . . . .	1		
Chlorosis . . . .	2			Lepra . . . .	2		
Cholera . . . .	2			Leucorrhœa . . . .	14	2	
Colic . . . .	2			Lumbago . . . .	7		
Constipatio . . . .	19			Lupus . . . .	2		
Cynanche tonsill. . . .	12			Mania . . . .	2		
tracheal. . . .	2			Melancholia . . . .	1		
Debilis . . . .	14			Menorrhagia . . . .	4		
Dentitio . . . .	9			Morbus coxarius . . . .	1		
Diarrœa . . . .	49			Necrosis . . . .	1		
Dysentery . . . .	42			Nephritis . . . .	1		
Dyspepsia . . . .	35			Odontalgia . . . .	9		
Dysuria . . . .	7			Ophthalmia . . . .	23		
Enteritis . . . .	3			Orchitis . . . .	1		
Epilepsy . . . .	2			Otitis . . . .	1		
Epistaxis . . . .	2			Palpitatio . . . .	1		
Erysipelas . . . .	10			Paralysis . . . .	8	1	
Eyeball, injury of . . . .	1			Paronychia . . . .	1		
Carry forward, . . . .	538	12	10	Carry forward, . . . .	1013	79	34