In the	8th month	6	leeches of middle size
"	12th "	8	" "
"	16th "	10	" "
"	2 years	12	" "
"	3 "	14	" "
"	5 "	16	" "
"	8 "	18	" "

These, I repeat, are powerful quantities of blood, only applicable in the first stage of the most acute and extensive inflammation in a healthy and strong constitution.

The *counterindication* of bleeding is of higher importance with children than grown-up patients. A few leeches, by a mistaken indication, can, in the latter, produce a disastrous effect. Guard against leeching a chlorotic, atrophied, or rachitic child; these are the most decided counterindications, and you must be a good observer, in order to detect these counterindicative complexions, even in a moderate degree, to avoid hurtful mistakes; for instance, by leeching the head of a rachitic child, on account of repeated headaches, to which they incline, or the chest, because it coughs, with simultaneous dyspnoea, the result of its narrowed chest. For ambiguous cases accept the rule, that it is better to let an inflammation, which would be very much benefited by leeching, run its course without it, than to leech in a case which is not inflammatory, in a rachitic or in an anæmic child.

Cold water.—I had already opportunity to recommend it as the unique antiphlogistic remedy, to be taken by mouth, for suckling infants. As much as one or two dessert spoonfuls every hour, may be considered as effective quantities for children one or two years' old. Of the external application of cold water, I shall speak amongst the external remedies.

Very frequently we meet, amongst the antiphlogistic apparatus, emulsions, (sometimes strengthened with a solution of nitrate of potass,) acids, and neutral salts. All these prescriptions I find objectionable for infants or tender children. If we continue to give them for one day or two, the stomach of these delicate creatures commonly becomes deranged. Of mercury I will speak in another place. There are, however, cases of children already past the age of lactation, in which some circumstances invite you very much to prescribe a cooling medicine. No doubt cold water is not so active with them as in suckling children; and, on the other hand, their stomach bears already some heterogeneous impressions. Then let me recommend to you for such the following *cooling mixtures*:—℞. Aquæ Destillatæ, ʒ j.; Kali Citrat., ʒ ss.; Syrup. Citr., ʒ iss. For a child about one year old, every hour or two one teaspoonful. Or, if there is a fever, characterised by the high temperature and dryness of the skin, with a tendency to a pharyngeal inflammation, the following is worthy your confidence:—℞. Decoct. Fruct. Tamarind. (ex, ʒ ij—iij.; ad Aquæ ʒ iss.;) Acid. Hydrochlor. Dilut., ʒ j.; Syrup. Citr., ʒ iij.

Purgatives.—To void, if necessary, the meconium, and in general for tender infancy there is but one convenient purgative, that is, castor oil. After the fourth month, if a stronger purgative is wanted, I have

found the following preparation to answer the best, of which I show you here in this bottle, under the name of *aromatic senna tea*, prepared by Mr. Robertson, as follows:—

A quantity of Alexandrian senna leaves are digested with proof spirits of wine during twenty-four hours, then taken out, moderately squeezed, and then slowly dried by moderate heat. Then take of the—

Prepared senna leaves	...	...	...	4 parts
Camomile flowers	...	...	...	1 "
Elder flowers	...	...	...	1 "
Fennel seeds	...	...	...	1 "
Anis seeds	...	...	...	1 "

Of this mixture the quantity adequate for a child about six months old will be for one infusion, dose ʒ j.; for a child two years old ʒ ss. or ʒ ij.; for an adult about ʒ ij.—iij. To each portion you may add bitartrate of potass in the proportion of gr. xij to ʒ j. of the tea. At the time, when needed, a hot infusion is to be made, during fifteen or twenty minutes, with a quantity of water not larger than the patient is able to take at once, sweetening it with a little sugar. The action is generally exerted after about three or four hours; if not at that time, then the same dose must be repeated.

With regard to the camomile and elder flowers, entering in the above composition, I must observe that I use the samples of these aromatics imported (by the care of Mr. Robertson) from Hamburg. All aromatics of the English soil are considerably less strong than those of the Continent. The English camomile, as everybody can be satisfied by comparison, is very different from that of Germany, the former being much more bitter, and much less aromatic; consequently the English makes the infusion disagreeable and less antispasmodic. The difference of climate, in particular the dry hot summer of Germany, as well as of the southern countries of Europe, account for this difference.

From this aromatic senna-infusion, I can assure you, you will derive great benefit with delicate children as well as ladies. Its aromatic ingredients obviate, in general, griping, and promote the expulsion of flatulencies. For a child above six months old, and of a good complexion, if you desire a strong derivative effect of the purgative, you may use the common senna-infusion with some neutral salt dissolved in it. In some cases jalap with calomel. This latter, however, I object to very strongly as a simple purgative; it is in its place if we wish to act upon the excretion of the bile.

Next we will proceed further in the series of remedies.

CASE OF

FRACTURE OF THE SPINOUS PROCESSES OF THE LUMBAR VERTEBRÆ.

REMARKS ON THE TREATMENT OF SPRAINED BACK BY "FIRING."

By JAMES DICKINSON, Esq.

AMONG the various, I may say numerous, accidents, which are continually occurring in the iron works, none perhaps are so frequent in occurrence as injuries to the

spine; nor need this surprise us if we consider for a moment the class of men to whom these accidents happen, viz., miners and colliers, who work in small compartments, technically termed "stalls," the roofs of which are so low as to compel the men, while working, to stoop forward, and at times to sit, so that if any of the superincumbent mass give way, it is almost certain to fall on their backs. These pieces of mine vary in weight from a few pounds up to a ton. In no case but in the one reported below have I met with fracture, nor, I may add, any unfavourable symptoms. Retention of urine, generally spoken of as being so common, has not occurred in a single instance. The men complain of some stiffness, but are generally able to resume their work in a few days.

At eight A.M., I was sent for to see J. M., a collier, who stated that about one o'clock that morning a lump of mine weighing upwards of half a ton had fallen on his back. On examination I found great effusion in the lumbar region, circumscribed, having the appearance of a cyst to the touch; it was soft and yielding, giving one the idea of a bladder filled with water. On feeling for the extremities of the spinous processes, all traces of them were lost from the first to the fourth lumbar vertebræ or thereabouts. This abnormal appearance, I was inclined to attribute at the time to the effusion, which prevented a perfect examination. The part was ordered to be constantly fomented, determining to check if possible, any unfavourable symptoms that might arise. The accident occurred on the 10th of May, and he was visited daily up to the

24th.—No symptoms having arisen demanding interference, all swelling having now subsided, I was enabled to examine more accurately the spine, when my previous diagnosis was fully confirmed. From the first to the fourth lumbar vertebræ inclusive, in a line corresponding to the extremities of the spinous processes, all traces of them were lost, and in their places was a soft, yielding surface; the outline of one of the spines, however, I fancied I could detect, deflected to one side. The last dorsal and lumbar spines could be distinctly felt. He never lost sensation and power over his legs, and only complained of weakness in his back. The man improved daily, and six weeks from the date of the accident resumed his work.

Remarks.—Mr. Shaw accounts for the absence of unfavourable symptoms in these cases, by stating "that from the tenth dorsal vertebra, where the cauda equina commences, to the termination of the spinal cord at the second lumbar vertebra, the roots of the nerves enclose and protect that important organ so effectually, that severe injury to the surrounding bones may not reach the cord. When fracture occurs lower down, of course the dangers of paralysis taking place are diminished, for the long loose nervous fibres composing that part can accommodate themselves to the changed direction of the canal, without loss of function." He also points out the fact of "the lumbar vertebræ having to sustain the greatest weight of all the spine, as well as enjoying considerable freedom of motion, and accordingly liable to sudden and severe shocks, it was provided that the

spinal marrow should close this up, in order to protect it from injury." The case is interesting, as affording an illustration of Mr. Shaw's views, as well as pointing out the fact, that in these cases we are enabled to give a more favourable prognosis, and speak with greater certainty, than in injuries situated higher up.

"*Sprained backs*" are cases which give the surgeon, both in private and public practice, much trouble and annoyance, appearing, as they do in many cases, to resist every remedy. Many cases having come under my notice, and finding that blisters, cupping, stimulating liniments, &c., failed, at the suggestion of Mr. Hinton, I tried "firing," and the results have been most successful: patients who for many weeks have evinced the greatest agony, have, after the first or second application, been perfectly cured. The plan to be adopted is as follows:—Heat a small metal button, (the shank of which is fixed in a wooden handle,) over a spirit lamp to such a temperature as can be borne with slight pain, then pass it several times lightly over the part referred to, and which, in most cases, is confined to a particular spot on the back. It is unnecessary to produce vesication, a slight redness of the skin sufficing. A second application is not often required; a third seldom, if ever. The pain, I would observe, produced by the application appears to be rather *severe*, and causes them to jump, the effect produced being not unlike that of galvanism; it is, however, quite transient, passing off in a few minutes. Of the beneficial results of this remedy the following case will afford an example:—

An old man had been suffering from a sprained back for seven weeks; he was unable to follow any employment, from the constant pain, aggravated as it was by the slightest motion. I well recollect seeing him walking to the surgery, at a very slow pace, with the aid of two sticks, and his body bent forward, and also the change that resulted from the "firing." He felt much easier, was enabled to walk home at a moderate pace, and carried himself more upright. Two more applications were necessary. At the end of ten days he was quite free from all pain.

It is in such long-standing cases as this, that two or three applications are required; in recent cases one will be found sufficient. That there is nothing novel in the plan of treatment I am well aware; that it has from time to time been recommended is no less true: nevertheless, it appears to me to be a remedy which has fallen into desuetude; I have, therefore, brought it before the notice of my professional brethren with the hopes that they may be induced to employ it. The easy mode of application, the certainty of its results, and the rapidity with which it gives relief to the patient, (in many cases in a few hours), are points which, in my opinion, more than counterbalance the chronic plan of treatment, (if I may use the term), by which a patient becomes incapacitated as much from the severe cupping, blistering, and counter-irritation, in its various forms, as by the original sprain. Ought we, then, I ask, to discard a remedy so simple and unfailing?

Blaina, February 6, 1852.