July 26th.—The oil had not operated, had no discharge of water, complained of soreness of the abdomen, with some swelling above the pubis, with a distinct line of inflammation in the direction which the stake took. Her cough produced more pain at the time of coughing than it had done before. Pulse 110, with hardness. Took away one pint of blood from the arm, and drew away three pints of urine with the catheter, which gave immediate relief. Dressed the wounds as yesterday, ordered the same food as before. Repeated the Oleum Ricini, and in case it did not operate, ordered half an ounce of Sulphate of Magnesia every two hours till this did.

July 27th.—At this visit I met Doctor M. Spalding in consultation. Found the physic had operated, which gave ease. Pulse 90. Complains of some soreness of the abdomen, drew away one and a half pint of urine, dressed the wounds as before, food the same.

At five o'clock in the afternoon I visited my patient again, found her pulse 100, with some cough, pain in the breast and abdomen. Took away one and a half pint of blood from the arm, and drew away one quart of urine, which gave great relief.

July 28th.—Found my patient better in every respect, could turn herself in bed without any assistance for the first time since the accident. From this time to the completion of her cure, there was no uncommon or unnatural appearance observed. The patient evidently improved daily. I drew off her urine seventeen days in succession, after which it became unnecessary. In her first attempt to walk her body inclined a little to the left, but she soon became erect. Six weeks from the time of the accident the patient was able to attend school fifty rods from home. I bled her during confinement five times; and she subsisted these seventeen days wholly on water in which Indian meal had been boiled. She now enjoys the finest health.

Bedford, N. H. October 27, 1824.

On some of the effects of the Poison of Lead. By A. L. PEIRSON, M. D.

[Communicated for the New England Journal of Medicine and Surgery.]

OF all the diseases to which artisans, from their peculiar trades, are exposed, none so frequently fall under the observation of physicians of this part of the country, as that class of complaints which arises from the poison of lead. The immediate effects of this poison appear to be, *in all cases*, upon the

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nervous system. Colic, paralysis, pain of the head, Epilepsy, Apoplexy, Asthma, are the affections which it produces, and, as far as our experience goes, the frequency of their respective occurrence is in the order in which we have enumerated them. The *effect* so certainly follows the *cause*, that scarcely an individual can be found, whose occupation has exposed him for any considerable part of his life, to the contact of the oxide of lead, under a summer temperature, who is not affected with some of these diseases. He will, at least, be found to have frequent attacks of colic, which he is anxious to designate bilious,—or complain of weak wrists, which he will not allow to be *palsied*. Potters, all persons employed in preparing or using paints, even those employed in boiling linseed oil, to which litharge is added in considerable quantity to communicate the drying quality, are liable to be affected with these diseases. It is true, their susceptibility to them varies in a very wide degree, and is, no doubt, proportioned to the excitability of their nerves, and the activity of their absorbents. We have said it is the *nervous system* upon which the first effects appear. The *inflammatory* symptoms which supervene upon colic, are a natural consequence of the peristaltic motion of a part of the bowel being suspended. An accumulation of fecal matters and vitiated secretions takes place, and occasions the phenomena of enteritis. Hence the utility of blood-letting, which is not indicated for the local paralysis. A *peculiar hardness of the pulse*, which is not diminished by bleeding, is also probably owing to an alteration in the coats of the artery, to be attributed to the impression made upon the nervous system. This is, to be sure, an unsatisfactory way of accounting for this very peculiar symptom, of the existence of which, in cases of long standing, any observer may be satisfied.

Painters are more than others, exposed to these diseases, some of which, as colic, are no doubt aggravated by exposure to the oxide of copper, and perhaps of some other metals. The oil of turpentine, which is used in almost all the mixtures of painters, has been thought, and I believe with good reason, to aid the volatilization of the metallic poisons, and favour their absorption. The free use of ardent spirits is peculiarly injurious to this class of artisans; our own experience has given us abundant proofs that it increases their susceptibility to all the affections we have enumerated.

The most important facts to be inculcated in regard to the prevention of these evils, are, First, that it is by absorption, and principally *pulmonary absorption*, that the poison is conveyed to the system. If it were not so, the cleanly artisan would enjoy

some degree of exemption, which does not appear to be true. To be sure, eating with unwashed hands, and wearing garments soiled with paint, may contribute a part to the effect of exposure. But if it were only so much of the metallic oxide as was swallowed, or absorbed through the cutaneous pores, which produced the effect, the above mentioned should be principal instead of auxiliary causes. I have heard painters declare they could taste these exhalations in their mouth, and feel them in their eyes.

In the second place it is to be observed, that *caloric* is necessary to volatilize the metallic oxide; and therefore the higher the temperature, the greater the danger. Our rules of prevention to artisans should be founded on the principles we have mentioned, and they should be advised, as much as the nature of their employment will permit, to *keep the surface of the body*, as much as possible, *covered*,—to attend to the *cleaning* of their garments and skin,—to shun a high temperature and close rooms,—in all practicable cases, in their laboratories and elsewhere, to adjust a *current of air*, which shall carry from them the noxious exhalations,—to avoid the habit of drinking spirits, and to preserve the bowels in a soluble state.

The following is the case of a sufferer from the poison of lead.

J. W. painter, aged 37, of tolerably robust frame, became my patient with severe colic, September 15, 1819. The attack was attended with inflammatory symptoms, and with very severe vomiting, and was subdued by copious bleeding, leeches applied over the whole abdominal region, and a mercurial course. The attack was followed by a paralysis of the extensors of the hand and wrists, which continued gradually to diminish, without totally disappearing until another attack of colic took place. He continued his occupation of a house-painter, and was attacked with colic ending in enteritis, and followed by paralysis of the extensors, and sometimes pains in the extremities, every few months, for the next five years. I have frequently cut off the complaint by bleeding *ad deliquium*; but whenever this was tried he never failed to have a most tedious convalescence. A mercurial course seemed to operate as an antidote to the effects of lead. His last attack, which was brought on by exposure to rain in a La Fayette show, in the Summer of 1824, was unusually obstinate and severe, and left him in a very feeble state, but with symptoms of decided convalescence. His appetite was good, his bowels regular, and his flesh and strength gradually returning. He became at this time impatient and discontented with my at-

tendance, and placed himself under the care of a quack, who sweated him, gave him repeated violent emetics, and freely administered capsicum and other powerful stimulants. At the end of a fortnight, sadly changed, and convinced of his rashness, he besought my advice again. He was now labouring under a most distressing cough, with dyspnœa, and a profuse bloody expectoration; his feet and hands were puffed up with anasarca swelling, his pulse hard and frequent, his appetite gone, and his stools deficient. He was placed on the dispensary list, under the care of Dr Choate, who, in conjunction with myself, used every probable means of cure in vain, and at the end of a fortnight from the commencement of our attendance he expired. He had no return of colic. The following were the morbid appearances on dissection, 30 hours after death.

THORAX.

Left lung presented an healthy appearance throughout. About 6 ounces of water was effused on this side the thorax. Heart unusually large, but otherwise not diseased. Water of the pericardium not excessive. Right lung connected to the sternum and cartilages of the ribs, by very strong, but apparently recent adhesions. The upper portion of the superior lobe had externally a natural appearance, and crepitated on pressure, but when cut into, a thin frothy bloody mucus freely exuded. The rest of the lung was solid, and gorged with blood. When cut into, a bloody fluid was freely discharged. About the same quantity of water was found on this side the thorax as on the other.

ABDOMEN.

Liver larger than natural, and of rather greater hardness. Spleen was also larger and harder than natural. Stomach presented, externally, remarkable alteration of form, tapering in a funnel-like shape from the left extremity to the pylorus, by which alteration its capacity was diminished to half its natural size. Internally the mucous coat was very much corrugated throughout, and the extremity or edge of the rugæ, of a deep purple colour. There was redness of the whole surface. The small intestines were contracted in many places, but every where pervious. The most remarkable contraction was of the ileum at its junction with the cœcum, where the caliber of the intestine was reduced one half. The colon had also several contracted places.

REMARKS.

When the history of a case of chronic disease can be traced for several years previous to its fatal termination, the appearances which the diseased structures exhibit, are particularly interesting. In the above case, the subject suffered for many years from the effect of the poison of lead, and was at last cut off by a new disease. The stomach exhibited the most remarkable changes. The contraction of this organ was probably owing to the same cause as the contraction of the intestines, but the appearances of acute inflammation on the internal surface, must have been the effect of the severe empirical practice. The engorgement of the right lung, and the water in the thoracic cavities, were probably owing to the same cause. On the whole, it was surprising, that after the repeated occurrence of so many attacks of inflammatory disease, the intestines should have remained so little altered in structure.

Salem, Nov. 26, 1824.

MISCELLANEOUS NOTICES.

On the Use of Assafœtida. By GEORGE PARKMAN, M. D.—October, 1822. On beginning to recover from a catarrhal fever, I had a sensation of stricture in the chest, and provocation to cough, whenever any one entered the room, or noticed me. As soon as I felt them I took powdered assafœtida 4 grs. Soon after swallowing it, the irritability, &c. subsided. To ascertain the power of assafœtida, I gradually enlarged the dose to a teaspoonful. Relief always followed, and no other sensible effect. I have taken several such doses in a day. With the same satisfaction as in my case, I have since used assafœtida in 8 persons, to relieve irresistible propensity to cough. Some of my medical friends, to whom I have related these facts, have since used assafœtida in similar doses, with results like mine. It has proved very efficient in spasmodic asthma.

Case of Hydrocele, successfully treated without an operation, by Dr Jonathan Sherwood, Champion, Jefferson Co. N. Y.—In this case the disease began about two months before the time at which Dr Sherwood was consulted. The tumour was then about five inches in length, and four in diameter at the most depending part, extending upward in the direction of the sper-