I would sanction tracheloraphy, if the patient cannot give time for a better plan of treatment.

It will thus be seen that I consider the cases requiring tracheloraphy to be rare, and that I do not think it justifiable for the repair of a slight cervical fissure of recent occurrence or of old standing. When tracheloraphy has been advised by one practitioner, it will be wise to take the opinion of another, for I have already heard of a lady, who was told by a distinguished gynaecologist that her case was serious, and required an operation, for performing which his fee would be sixty guineas. On going the next day to another distinguished practitioner, she was told that there was only a small fissure at the mouth of the womb, and that she could be easily cured by simpler treatment.

FUNGOID POISONING.

By T. JACKSON, M.R.C.S., Welton.

THE dead body of a child, about two years of age, was found on a bed of nettles by the side of a drain, where it had lain perhaps from five to seven days. The eyeballs and mouth were filled with innumerable small maggots; otherwise, it was in good preservation, and had been well nourished. There were no marks of injury externally, excepting a slight excoriation of the left hip, and a mark around the neck, as if a handkerchief had been applied.

The body when opened presented a most healthy appearance, with certain exceptions; the most important one being the hue of the stomach *in situ*. This viscus as seen through its peritoneal covering was discoloured by mottled purple patches, especially at the larger curvature at the cardiac end, fading in intensity of colour gradually to the pyloric end, and it was distended with its contents. On removing it from the body, and opening it with scissors through its lesser curvature, these contents proved to be nearly half a pint of mushrooms—the *agaricus campestris*; apparently in the form of an old black-gilled mushroom. Yellowish white pieces of the outer skin of the fungus, with flesh of the same attached, were numerous dispersed amongst the dark grumous mass. Two of the pieces of the outer skin were of the size of a two-shilling coin, and appeared to have been torn from the fungus, and swallowed without mastication. The remainder of the mass was composed of the dark gills of mushroom with here and there small pieces of meat like pork.

On removing these contents, the mucous lining of the stomach appeared in an intensely inflamed congested state, in hue approaching to purple, with scarlet patches, gradually diminishing in intensity of colour towards the pyloric end. The mucous membrane was easily detached from its other coats, the muscular one was not greatly injected, that is, not nearly so much as the mucous lining, although, as before mentioned, the great discoloration was visible prior to the removal of the stomach from the body. The duodenum was but slightly injected, being free from inflammation. The smaller intestines were healthy and slightly distended with gas. The colon was without inflammation. The bladder contained urine. The lungs were sound, contracted rather than otherwise, not filling the thoracic cavity. The heart was sound. Life had evidently been speedily ended; cut short by the intensity of the inflammation (which did not extend beyond the pylorus). The power of the stomach to expel was destroyed, or it could not have retained the quantity it held.

No information has been had to show how the child obtained the fungus. It seems to have been hastily swallowed by the two longer pieces found bearing no marks of teeth, though the smaller numerous pieces had been masticated.

The purplish red colour of poisoning by fungi is conspicuously widely different from the vermilion red of destruction by arsenic. In a case of fungoid poisoning by the champignon or morel, as related in the *Lancet* of June 28th, 1856, the necropsy is stated to have shown, that "the mucous membrane of the stomach was highly congested, especially at its larger end, where it was of a dusky red colour, indicating an intensely inflamed condition." In *Hooper's Dictionary* are related the cases of the poisoning of several French soldiers, who had eaten the *agaricus muscarius*. The necropsy is thus related: "On opening the dead bodies, the stomach and intestines displayed large spots of inflammation and gangrene; and putrefaction seemed advancing very rapidly."

We might, it is fair to presume from this latter case, and from the dark discoloration displayed in the stomach of the unfortunate child first mentioned, have also expected gangrene, had she lived longer.

Death from eating mushrooms may not be frequent; but I fancy that, if related, we should hear of many cases of their disturbing effects. One case I remember, occurring years ago, which I was called to visit at a

hamlet, a mile and a half from my residence, where I found a man lying on the mat before the fire, in the opinion of the bystanders, dead. "You are too late, doctor, he is gone," they said. He had just breakfasted, and had fallen down in a fit. "What had he for breakfast?" I asked. "Oh, nothing, sir, out of the usual way." On examining him, I found he was not dead; but his pulse was scarcely distinguishable, and he was in a deep lethargy. I had luckily by me a drachm of sulphate of zinc, which I at once dissolved and forced down his throat, calling at the same time for a feather. They brought me a wing, which I at once began to work up and down his gullet, and with good effect; for he speedily vomited, and filled a large wash-hand basin with mushrooms. "Oh, yes, sir, he had mushrooms to his breakfast." "Yes," I said, "I see that he had; but you informed me that he had had nothing unusual."

The man was quickly well; but, if he had not been speedily relieved, he would have died comatose, and his stomach would probably have displayed the destructive inflammation as related in the aforementioned cases. In this case, the fungi were fine young healthy mushrooms, pink-gilled. Still the stomach was paralysed, by either their quality or quantity; and it may be that fungus may be taken, in poisonous quantity, by partaking too largely of this agreeable esculent.

LEAD-POISONING.

By HORACE SWETE, M.D.,

Physician to the Worcester Infirmary, and County Analyst.

ON reading the account of the lead-poisoning case at Keighley, in the *JOURNAL* of November 4th, I think a few notes of a case that was under my care at the Worcester General Infirmary may throw some light on the matter.

Whilst the medical men seemed to think that the treatment with potassic iodide had eliminated much of the lead, and so accounted for the very small quantity found in the viscera, Dr. Tidy, viewing the case through chemical spectacles, stated that potassic iodide will make an insoluble salt of lead, and so fix it in the tissues and prevent its elimination. He was also of opinion that wrist-drop or some form of paralysis from muscular atrophy should have been present, which was not noticed by the medical attendants.

A painter was admitted on February 9th, 1880, as a patient under my care, in the wards of the Worcester General Infirmary. He had been suffering for some time from constant attacks of colic. The usual blue line in the gums from lead-poisoning was well marked. There was some weakness of the hands, but nothing that could be called wrist-drop, or wasting of the muscles.

On admission, I placed him under the action of potassic iodide in five-grain doses every four hours, gradually increasing the quantity to ten grains during the succeeding ten days.

In most cases of my hospital practice, where the urine gives indication of disease or alteration by treatment, I have collected the quantity passed in twenty-four hours, and submitted it to a thorough quantitative analysis.

On the 9th, before treatment, the urine contained no lead.

On the 10th, the whole amount of urine passed, being 1011 cubic centimetres, contained 5 milligrammes of lead.

On the 13th, 1022 cubic centimetres of urine were passed, and 12 milligrammes of lead were found. This gradually increased in quantity to the 25th, when 22 milligrammes were passed. It then declined until, in about a fortnight, there was only a bare trace of lead, and the patient was entirely relieved from the colic.

The effect of the first few doses was greatly to increase the colic, and call for the assistance of opiates. This re-poisoning I have invariably found to be the case in treating lead-poisoning with potassic iodide.

Now here we had a genuine case of lead-poisoning without wrist-drop, and the diagnosis confirmed by analytical results. It is quite true that potassic iodide, acting on a solution of lead, will throw down a precipitate of iodide of lead sparingly, soluble in cold and slightly soluble in hot water; but the physician is acting not at the laboratory bench, but on the tissues of the body imbued with vital processes, and the fact remains that lead was eliminated. Lead appears to combine with the albuminoids of the tissues during life as an albuminate, giving rise to the severe colicky pains and the wasting of the muscular tissue; the blue line being dependent on sulphuretted hydrogen being formed from decomposing food about the teeth, and the depth of tint often indicating the amount of want of cleanliness in the patient.

Might not the potassic iodide in the living laboratory act by forming a double salt of iodide of lead and potassium, which is soluble in water or in iodide of potassium to a considerable extent, compared with the iodide of lead?

I propose to treat any future well-marked case with sulphate of ammonia, which I have found to be quickly eliminated, without change, by the kidneys. I believe the first action of this will be to form a sulphate of lead, which will then be dissolved by the remaining sulphate of ammonia, and be speedily eliminated. I have, as yet, had no experience of this proposed treatment in any patient, and it is difficult to predicate whether the changes we find in the chemist's laboratory will be the same in the vital laboratory; and I also think any eliminating process should be used at first with caution, quantitatively analysing the urine day by day, as the patient may be re-poisoned by too large a quantity of lead being set free at once in the system.

From this experience it would seem that the conclusions at which Dr. Dobie and Mr. Allen arrived were correct as to the elimination of a considerable quantity of lead during a fortnight's treatment by potassic iodide.

PROLONGED INCUBATION OF SCARLET FEVER.

By R. J. BRYDEN, M.R.C.S.Eng.,
House-Surgeon to the Gravesend Infirmary.

HAVING read, in the last few numbers of the *BRITISH MEDICAL JOURNAL*, some correspondence concerning the length of the incubation stage of scarlet fever, and it being a subject about which I am much interested, and which, I think, is of some importance to medical men and to the outside public, I have thought I would give some particulars in favour of the short incubation period of scarlet fever.

I was acting as house-surgeon to one of the children's hospitals in London about three years ago, and was myself a victim to this dire complaint. Since that, I have contracted rather an interested affection for the disease, and have endeavoured to collect some authentic notes concerning it. Of course my experience is very limited; but, in nearly forty cases, I have ascertained that the incubation stage did not extend beyond six days in the longest period. Perhaps I might relate my own personal experience of scarlatina.

On the Sunday before I was taken ill, I felt quite well, and spent the day agreeably with some friends. On the Monday morning, I saw the out-patients, and amongst the new cases was a little girl aged three years, who was suffering from a very bad throat. The child seemed very ill; and the throat, on careful examination, looked very suspicious, the mucous membrane being of a dusky red hue, whilst the tonsils were coated with small exudations of lymph. On questioning the mother, she told me she had heard that there were three cases of scarlatina in the building where she lived; it was a block of Peabody Buildings in the neighbourhood. I told the mother that I thought it was a case of scarlet fever; and afterwards I ascertained that the little patient died very soon in a highly delirious state, and with a well-marked rash on the skin. I thought no more of the case, but did my work as usual during the day. I had been reading hard of late, and did not go out that day. I went to bed feeling quite well, but woke up in the morning about six o'clock, feeling my throat sore. I ascertained, with the aid of a mirror, that my tonsils were much swollen and inflamed. I just managed to wade through breakfast; but, when visiting the wards, I began to experience a feeling of languor and weakness, and one of the nurses remarked how ill I looked. I had lost all appetite for luncheon, and therefore I thought I would try to do some reading; but I found this impossible; so I took my hat and went for a walk, thinking the air might do me good. After I had gone some little distance, I shall never forget the dreadful sensations I felt. My body seemed too heavy for my legs; a horrid sensation of nausea and faintness came over me; and I felt almost inclined to commit suicide. I got some brandy; but, soon after swallowing it with pain, I vomited two or three times, and felt so ill that I took a cab and returned to the hospital. On my way back, I was sick again, and felt very chilly. My bed was soon ready for me; and, being in a shivering state, piles of blankets were placed over me. About an hour afterwards, I was taken with fearful gripping pains in the abdomen, followed, in about another hour, by profuse diarrhoea and attacks of vomiting. A medical man saw me, who examined my throat and gums. He would not say what was the matter with me, but suggested that I was suffering from the effects of lead-poisoning. The succeeding night was spent in alternate attacks of diarrhoea and vomiting; in fact, the nurse who was with me was quite frightened at my condition. When daylight appeared on the Wednesday morning, I observed that my chest and arms were covered with a well-marked scarlatinal rash; and then immediately it flashed through my mind that I had contracted the poison from the throat of the child I had examined on the Monday morning. Although my throat was very bad, I succeeded in weathering the storm, and recovered perfectly, without any complications whatsoever. No

albumen was ever found in my urine. The whole of my epidermis peeled, and continued to do so for six or seven months after the rash had gone, my feet being the last to lose their diseased covering. Strange to say, eight months after the scarlatina left me, my toe and finger nails began to desquamate, and were marked with the furrows caused by the slow dropping off of the epidermic cells for two or three months afterwards.

I cannot discover, in any book, mention made of an incubation stage in scarlet fever lasting fourteen days; and I think that these rare cases—for rare they are—should be carefully chronicled.

CURIOUS SYMPTOMS IN A DOG AFTER A DOSE OF MALE FERN.

By FREDERICK MASON, L.R.C.P.Ed.,
Surgeon to the Eye Infirmary, Bath.

UNTIL the news came from India (*BRITISH MEDICAL JOURNAL*, October, 14th, page 748) that a gentleman had been poisoned by an overdose of male fern, taken for the destruction of tapeworm, it was generally supposed that this drug was innocuous to the individual, and acted specifically upon the parasite only.

The following notes of some curious symptoms in a dog may be of interest.

In February 1881, a gentleman complained of the annoyance he suffered from portions of tapeworm constantly escaping from him. I prescribed the ordinary dose, half a drachm of the liquid extract of male fern, with the usual result.

At the same time, his son had a dog, a cross between a bull and fox terrier, suffering badly from tapeworm; and, seeing the good effects upon his father, thought he could do no harm by giving some to his dog. He procured one drachm from a druggist; and, after keeping the dog without food for a day, gave the dose about half-past six in the morning. Shortly after taking it, the dog began to stagger in its attempts at walking, and, at half-past nine, when placed upon the ground, fell over on his back, and was unable to get up. He now became completely helpless, having lost all muscular power. The ears, which were pricked (so-called) or upright, became flaccid, and dropped, and, from having the transparent pink or red hue, became quite white. I chanced to see him the day following. He appeared to be dying, unable to move; and, when lifted by the skin of the back, the legs and head hung down as they would do in a dead dog. There was no voluntary movement whatever. He continued in this state for three days, during which time he took no food or drink, with the exception of a little milk forced into the mouth. He did not pass any urine, and the bowels were obstinately constipated, notwithstanding castor-oil, in repeated doses, was administered to the extent altogether of between three and four ounces. After some of the doses of oil, he vomited a frothy white fluid. On the morning of the fourth day, he had a very costive and black motion, and after this he began to recover; but it was not until the sixth day that he was able to walk without staggering. There was no appearance of the worm in the motion; but, as so long a time elapsed before the bowels acted, and as he has not since shown any symptoms, it may be supposed it was digested in the bowels.

The dog has recently met with an accident, and it will be necessary to have him killed; but, previously to this, the owner has proposed to try the effect of another dose of the extract of male fern.

WEST HERTS MEDICAL ASSOCIATION.—The sixty-ninth meeting of this Society was lately held at Watford, Dr. P. Hood, president, in the chair. Dr. Iles read a paper on the period of incubation in diphtheria and in German measles occurring in the same patient. In the discussion which followed, Drs. Hood, Brett, Saunders, Fisher, Batterbury, Hobson, Lemon, and others, took part.

ESTIMATION OF THE QUANTITY OF BLOOD.—Messieurs Ghréant and Quinquaud are reported to have ascertained by measurement the volume of blood contained in the system of a live mammal. The method used depends on the carbonic oxide giving an oxycarbonised hæmoglobin, a more fixed combination than oxygenated hæmoglobin (the carbonic oxide being substituted for oxygen, volume for volume). An animal is made to breathe gas containing a known amount of carbonic oxide. The volume of carbonic oxide remaining is noted, say, in a quarter of an hour, and this gives the amount fixed. On the other hand, the blood is analysed to find the carbonic oxide fixed in a given volume. In this way it was found that the total weight of blood is between one-twelfth and one-thirteenth of the body-weight. In the normal state, there are no great variations.