amounting to opisthotonos. These symptoms continued while the prostration became worse, until on Monday, the 15th, about twelve o'clock, convulsions came on; and at 5 P.M. the same day he died.

After death, the face was bloated and the eyes suffused; the head was thrown back. There was nothing else remarkable. An inquest was held; but I regret to say no *post mortem* examination was made.

On Sunday, March 14th, a girl, aged 6, was taken ill with the same symptoms as the other two. I visited the place; and, on the fifth day of her illness, examined her, when she complained very much of her head and throat, and the former was thrown back. The face was red and swollen; the skin hot and dry. Temperature in the axilla, 103.4 deg. Pulse 95, weak. The pupils were dilated. The tongue was thickly furled; the bowels confined. After a prolonged convalescence, she recovered.

In the same house, there were the mother and six other children, but the three mentioned were the only ones affected.

According to the evidence produced at the inquest, none of those who were not taken ill partook of the water from the well in which the tobacco was found; hence the explanation of the absence of any symptoms in them. The persons in the other houses of this row procure their supply of water from a spring near a railway, two hundred yards away. It seems, however, that one other house, making two in all, also had been accustomed to get water from the well first mentioned; but, for some unexplained reason, some time before the 10th March, they likewise had taken their water from the well near the railway.

The source of water-supply to those in the house who were taken ill was a small shallow well some hundred yards away, situated near a canal; and, upon examination, I found there a shallow well cut out of a steep bank, with a feeble but persistent spring at the bottom of it.

While a sister of the deceased (the one taken ill on the Sunday) was taking water from this well on Sunday (14th), she noticed some tobacco in the water, and drank some of it; but, thinking no more of it, did not touch it nor mention the fact at the time to anyone. But next morning she spoke about it; and the same evening Dr. Thomas was made aware of this.

He immediately communicated with the police, and requested a policeman to go and remove the tobacco forthwith. This was done on the following (Tuesday) morning, and it was proved that half a quarter of a pound packet was taken out, and the tobacco shown to be of the strongest quality, viz., shag. On examining the tobacco, it was quite evident from its appearance and taste that it had been in the water for several days.

And here was, without doubt, the solution of the cause of all the symptoms, the chain of evidence being complete; but, at the inquest, though I carefully examined all the witnesses (being allowed to do so through the courtesy of the Coroner), I could not solve the other mystery, viz., how the tobacco got into the well, whether by accident or through the wilful act of some person. The jury, therefore, were obliged to find an open verdict.

INJECTION OF PERCHLORIDE OF IRON IN POST PARTUM HÆMORRHAGE, RESULT- ING IN DEATH.

By H. W. BODDY, M.R.C.S. and L.S.A.,
Cheetham Hill, Manchester.

In the absence of the usual medical officer, I was summoned, during the night of April 4th, to attend a protracted case of labour at the Prestwich Union Workhouse. The patient, Elizabeth H., aged 28, had been in labour about five hours; and during the last hour had, as the nurse informed me, made little or no progress. On examination, the head was found to present in the right oblique diameter of the pelvis, in the occipito-anterior position. The head was low in the pelvis, the forehead occupying the hollow of the sacrum. After waiting two hours, and finding no advance made by the head, the pains becoming weaker, and as no mechanical obstacle to the passage of the head was apparent, I proceeded to apply Robertson's long forceps. After application of the forceps, by assisting the pains with firm traction, the child was born, without difficulty, in from ten to fifteen minutes; being alive, of full size, and well nourished. The placenta was removed in about twenty minutes, in the usual way; and, immediately on its removal, I was alarmed by a sudden gush of about eight to ten ounces of blood following it. A flow of blood continued for a short time, until, by friction and pressure on the uterus, I caused it to contract, and the hæmorrhage was much diminished, but not entirely arrested. A binder was then firmly applied, and pressure kept up upon the uterus with the hand. The nates were kept sufficiently uncovered to see any external

hæmorrhage that should occur. The moment my hand was ever removed from the uterus it dilated, and a gush of blood poured forth; and though again, by pressure and friction, contraction was established, still the "thin red line" trickling over the nates reappeared after it was wiped away.

Having given several large doses of ergot, and having twice injected cold water into the uterus with but temporary good effect, I determined to adopt Dr. R. Barnes's plan of injecting into the uterus a solution of perchloride of iron. Accordingly, I made the solution recommended by Dr. Barnes (four ounces of liquor ferri perchloridi fortior to twelve ounces of water), carefully measuring both the iron solution and the water. An ordinary enema-apparatus was used; and after pumping the solution through the delivery tube a few times, to get rid of all bubbles of air from the apparatus, I introduced the pipe well up to the fundus uteri, a gush of blood occurring as I dilated the os for the passage of the tube. The nurse then worked the syringe, while I held the pipe in its position. The hæmorrhage ceased immediately on the injection of the solution; and, during the first part of the process, the patient made no complaint, and the uterus began to firmly contract. But during the latter part of the process, she began to be uneasy, complained of pains in the belly, then severe cramps of the flexors of the leg occurred; next she gave a shriek, crying, "Oh my belly"; a general convulsion took place, the eyes rolled and turned up, the skin became blue, the pulse ceased, and she expired. (All this took place during the last two or three strokes of the enema-syringe.) Artificial respiration was then kept up for some time without any good effect. The uterus was firmly contracted round the injection-tube, some little force being required for its withdrawal.

That the injection of the perchloride of iron was the immediate exciting cause of death, there can be but little doubt, as the patient conversed sensibly with me two or three minutes before the operation, and complained neither of pain nor of any other symptom. The hæmorrhage could not be the cause; for acting on Dr. Barnes's advice, of it being better to do it too soon than too late, as we cannot supply again blood once lost, the injection was used before the loss of blood had begun to affect the nervous system. Therefore, the convulsion cannot be confounded with those that occur at the closing scene of death from simple hæmorrhage.

The death was due, in my opinion, to excessive irritation and shock to the cerebro-spinal and ganglionic nervous systems; and my reasons are the following. During the first part of the injection, while the irritant action of the perchloride of iron was engaged in causing the strong tonic contraction of the uterus that occurred, the irritation to the sensory nerves was reflected no further than those nervous centres that preside specially over the reflex action of the muscles of the uterus. After contraction was established, the irritation, as it could not be further expended in causing more uterine contraction, seems to have been further reflected to the lower part of the spinal cord, probably through the uterine branches of the sacral plexus, and this would account for the cramp or violent contraction of the flexors of the leg. Passing higher up the cord, the irritation would next cause the general convulsion that took place; and the shock, at the same time, to the ganglionic system, would cause cessation of the heart's action through the cardiac nerves; the consequent blueness of surface arising from accumulation of venous blood in the capillaries of the skin.

It may be suggested that death occurred from entrance of the solution into the general circulation. But could absorption, to any extent, take place through a rigidly contracted uterus? If blood cannot pass through the walls of the uterus well contracted (and we know it cannot), is it possible for any other fluid to do so?

Again, it may be objected that cutting and cauterising operations are frequently done upon the uterus, no shock supervening. But I contend that the sensibility of the uterus in the pregnant and that in the non-pregnant state, are two extremely different things. Though it has not yet been proved that the nerves of the uterus are increased either in size or number during pregnancy, yet their power of conducting impressions, without doubt, is, as evidenced by the pain felt during the contractions, and by the reflex contractions, easily brought on during labour by irritating the os or cervix uteri. The area, too, over which an irritating and caustic injection would act is immensely increased in the uterus of a woman recently delivered.

My conclusion, then, is, without any doubt, that death in this case resulted from the action of the solution of perchloride of iron upon the lining membrane of the uterus. I considered at the time, and do so still, that I was justified, on the authority of Dr. R. Barnes, in using the iron injection. The patient would doubtless have sunk gradually had this not been done, and it seemed to me that it was the only chance for her life. But this case does not give much encouragement for the further use of Dr. Barnes's plan. If again forced to its

use, I should immediately cease injecting as soon as contraction of the uterus was set up. I proceeded further with it in this case, partly to thoroughly promote firm contraction, and partly to use up entirely the amount of fluid recommended by Dr. Barnes. In conclusion, I would observe, as this remedy is only upon its trial, that it would be for the welfare both of the public and the profession if all the unsuccessful, as well as the successful, cases in which it was used were published. Then it might be seen whether the results would be such as to justify its general adoption in these cases of hemorrhage.

GELSEMINUM SEMPERVIRENS AS A REMEDY FOR COUGH.

By J. ROBERTS THOMSON, M.D., M.R.C.P.,

Physician to the National Sanatorium for Consumption and Diseases of the Chest, Bournemouth.

No symptom in pulmonary complaints more frequently calls for treatment than cough. The skill and the resources of the physician are alike taxed by its persistency or its severity, by the failure of medicines to relieve, or by the intolerance of remedies by the patient. Any addition to our *Materia Medica*, therefore, which proves of real therapeutic value in the treatment of this symptom, calls for a patient investigation at our hands. I know that some will say, "Do not direct your attention too much to the treatment of cough in cases of pulmonary disease, and more especially in phthisis. Deal with the conditions which give rise to the cough, and trust, by so doing, to alleviate it." In most cases, however, this symptom is so urgent and so harassing that we must treat it. For this purpose, I believe we have in *Gelseminum sempervirens* a very valuable addition to our armamentarium. Of late this drug has received some attention in this country with reference to its action in nervous affections (see *BRITISH MEDICAL JOURNAL*, May 2nd, 1874, and September 18th, 1875; *Practitioner*, August 1875), but, so far as I know, little has been said with regard to its use in cough. I have administered it recently to a large number of patients suffering from pulmonary disease, as a cough sedative. The following cases will illustrate the results which have been obtained.

E. N., a young lady, aged 21, had a large vomica at the apex of the left lung. The rest of that lung was dull on percussion. Respiration was bronchial, and there was coarse crepitation both with inspiration and with expiration. The vocal resonance was bronchophonic. The upper lobe of the right lung was also the seat of limited softening. There was much troublesome cough, with copious expectoration. Tincture of gelseminum was administered in five-minim doses; this gave very great relief to the cough, which was most marked towards evening, the time at which the cough was most troublesome. The patient expressed great faith in the remedy, and preferred it to any other sedatives, of which she had had a great many. No bad effects were observed from its use. There was no nausea or sickness produced, and the appetite was not impaired.

N. T., a married lady, aged 30, had dulness on percussion over the upper half of the left upper lobe. Over the area of dulness there were bronchial breathing, fine crepitation, and bronchophony. She had a very irritable and spasmodic cough. The expectoration was very slight and mucopurulent. Eight-minim doses of tincture of gelseminum produced marked relief of both hacking and spasmodic cough. No unpleasant effect was produced by the remedy.

J. M., an unmarried woman, aged 26, had chronic phthisis in the second stage, over the whole of the left lung and the upper half of the right. She had an extremely irritable cough, especially in the night, which did not yield to any of the usual sedatives. Five-minim doses of tincture of gelseminum gave very great relief, and enabled the patient to get a fair amount of sleep.

J. H., an unmarried man, aged 35, had chronic phthisis in the third stage in the right lung. The deposit was scattered all over the left lung. His cough was very troublesome. Little relief was obtained from the usual remedies. Five-minim doses of tincture of gelseminum proved most useful in checking the cough. No unpleasant effects were noticed.

E. M., a young lady, aged 24, had congestion of the left apex, trachea, and larynx, and an excessively irritable cough, resisting all remedies general or local. Tincture of gelseminum in five-minim doses, combined with syrup of codeia, gave great relief.

J. G., an unmarried lady, aged 32, was subject to severe attacks of spasmodic asthma. Her attacks usually yielded best to bromide of potassium with belladonna; to this tincture of gelseminum was added, and the attacks were markedly much milder and of shorter duration. No unpleasant effects were observed.

A. B., a young lady, aged 23, had advanced phthisis. The cough was very troublesome. All the usual sedatives disagreed. Gelseminum gave relief to the cough, but could not be continued because of producing nausea.

These will sufficiently indicate the kind of cases in which I have found gelseminum useful. In some patients, when there existed much bronchial irritation, I have combined it with bromide of ammonium, tincture of squill, and syrup of codeia, and such a combination has often afforded very great relief. In no case, save the one last narrated, have I observed any unpleasant effect. In that, the nausea was only slight, but she was otherwise suffering so much that I did not think it right to persevere.

These results show that gelseminum has a marked power in subduing cough; that it acts probably as a nervous sedative; that it is useful when other sedatives have failed; that it seldom produces any unpleasant general effect; and that the kind of coughs in which it may be administered with advantage is very varied.

I believe further investigation will heighten our estimate of the value of this drug in dealing with so troublesome a symptom in the treatment of pulmonary complaints, and that a more extended acquaintance with its action will enable us to differentiate those forms of cough in which it is likely to be of most service. It is undoubtedly a remedy of no mean efficacy, and will, I feel sure, hold a permanent place in our list of *materia medica*.

SURGICAL MEMORANDA.

SYME'S OPERATION MODIFIED AND IMPROVED BY SAVING THE PERIOSTEUM OF THE OS CALCIS.

IN the *BRITISH MEDICAL JOURNAL* of the 2nd ult. is a paper by Mr. Joseph Bell of Edinburgh, in which he describes a modified and improved method of performing Syme's operation by saving the periosteum of the os calcis. I beg to inform Mr. Bell that Dr. G. H. B. McLeod, in the Glasgow Royal Infirmary, has performed Syme's operation exactly in the same way as Mr. Bell describes. From 1869 till 1873, I saw Dr. McLeod perform Syme's operation about fourteen times, in all cases saving the periosteum of the os calcis, and with the greatest success. Since that time, I had occasion to perform the operation four times. In all the cases, I saved the periosteum of the os calcis. All the cases did well; in two of them a considerable amount of new bone formed in the flap, making a splendid stump.

JOHN AITKEN, M.B., Carlisle, N.B.

THERAPEUTIC MEMORANDA.

TREATMENT OF WHOOPING-COUGH WITH CARBOLIC ACID INHALATION.

IN the *JOURNAL* of the 2nd ult., Dr. R. J. Lee has mentioned my name in connection with the employment of carbolic acid vapour in the treatment of whooping-cough. I am glad to have the opportunity of furnishing a concise account of the way in which it was used, and also of my experience of the remedy in question.

During the early part of the present year, I had under care about forty cases of the above affection (occurring amongst the children of officers connected with Her Majesty's Convict Prison, and not, as might be inferred from Dr. Lee's remarks, amongst the convict class). At the suggestion of Dr. Lee, I tried the inhalation of the vapour; but, owing to the number of cases on hand at the same time, and having only one inhaler on the spot, I was not enabled to apply the remedy separately to each case, as I should have wished. This difficulty was, however, in a measure, got over by having had two rooms placed at my disposal, the inner one of which was thoroughly impregnated with the vapour, made by boiling one part of acid with three of water. The little sufferers being then let into the apartment, the inhaler was kept in working order during the time they remained, generally about fifteen minutes; after which the door communicating with the outer room was thrown open. In this latter place, they were kept five minutes, and then, being well wrapped up, were despatched to their respective quarters; a distance which, at the most, did not exceed two minutes' walk. Great relief followed these inhalations; the distressing paroxysms accompanying the cough being especially alleviated; and the parents remarked that a good night's rest invariably followed after they had inhaled. This course of treatment was continued every other day for about five weeks, and proved eminently successful in all but two cases, in which