healthy. The mental faculties are perfect. He has no cough, diarrhoea, or perspirations; no pyrexia or hectic.

REMARKS.—The above is a typical case of mollities ossium. Numerous views have been advanced as to the nature of this disease. Trousseau (*Clinical Medicine*, vol. v, page 81) says: "Ought we to consider that there is a similarity between osteo-malacia and rickets? I say, we ought. In my opinion, and in that of many other physicians, they are one and the same." This opinion, he supports by statements, for which I must refer readers to the article itself; but which, in my experience, are quite contrary to fact. For instance, in the case above described, there has been an entire absence of the constitutional symptoms which are characteristic of rickets: pyrexia, profuse sweats, soreness of the bones, derangements of the alimentary tract, and inflammatory affections of the respiratory organs. Again, in alluding to the occurrence of fractures in rickets, he says (*Ibid.*, page 81), there is a "greater rarity of fractures in the rickets of adults than in the rickets of children." This is quite contrary to my experience; for, unfortunately, in Preston, rickets is most prevalent, yet I never have seen a case of spontaneous fracture in any out of a very large number of cases I have attended. Moreover, rickets is generally traceable to some definite cause, chiefly dietetic; but, in the case described, there is a total inability to discover any predisposing cause.

Niemeyer, in discussing the etiology of osteomalacia, says (*Op. cit.*, page 566) that, in this disease, "bones which have been hard become soft from re-absorption of the salts of lime. This explanation of the disease at once shows its difference from rachitis, where the lime-salts do not disappear from the bones, but have never been deposited there." I think it is open to some doubt, and contrary to clinical experience, to say that, in rickets, the lime-salts do not disappear from the bones. In rickets, a bone, that has hitherto been rigid and unbendable, becomes soft and yielding; and, I think, it requires something more than a mere *ipse dixit* to say that, in such a case, there has been no reabsorption of calcareous matter already deposited. Niemeyer further says: "The exciting causes are unknown; we only know that the first signs of it, in most cases, appeared some time after confinement, so that pregnancy, parturition, or the puerperal state, undoubtedly have much to do with the etiology." The effect of this statement is undoubtedly very much weakened by the fact that, in the case described above, the patient is a male; which clearly proves one thing, at any rate, that osteo-malacia may occur totally independent of pregnancy; so that, as fixed factors in the causation of this disease, pregnancy, parturition, and the puerperal state, are non-existent.

DIPHTHERIA.

By EDWARD PENNY, M.D.,
Medical Officer of Marlborough College.

MANY interesting communications have lately appeared in the BRITISH MEDICAL JOURNAL on the subject of diphtheria; notably the report of a paper by Dr. Astley Gresswell, on the chronic and recrudescence form of the disease, read before the Epidemiological Society.

I should like to state the results of my experience of diphtheria, as seen in a country practice during the past two years. In this period of time I have had fully 150 cases of sore throat, to which I venture to attach the specific name. Out of this number five died, three from extension of membrane to the larynx, and two from cardiac failure and vomiting; while in two other cases of laryngitis, ending fatally, I believe no membrane was present, though in the absence of *post mortem* examination I cannot be quite certain. But the point to which I wish specially to draw attention, is that the large majority of the cases were exceedingly mild, the patients perhaps feeling ill for a day or two, often scarcely complaining of sore throat at all, and in many instances refusing even to keep at home. I have sometimes seen, on the first day of illness being felt, a small patch of membrane on the tonsil, while on the following day there would be present only a shallow exfoliation where the membrane had existed, and on the next day again even this had disappeared, and the surface appeared smooth and even. Usually, however, a considerable part of the tonsil would be affected, and the membrane would adhere longer; while, in one severe case, patches were still present, after three weeks' illness. In nearly all, the membrane was confined to the tonsils, but in a few the discharge of clear or blood-stained fluid from the nose showed that the nasal cavities were affected, and in one a patch of membrane was seen on the margin of the anterior nasal orifice. In two or three severe cases the soft palate and pharynx were thickly coated, and in the three fatal cases mentioned above, the larynx became involved.

Often in the convalescent stage the tonsils remained enlarged (as Dr. Gresswell has remarked), and in the crypts would lurk remnants of membrane, giving an aspect closely resembling follicular tonsillitis. Indeed, in some cases I do not think it is possible to make a distinguishing diagnosis between the two diseases, when the throats are seen for the first time at this stage. Another error easily made in such patients, is to overlook the presence of the membrane altogether, for the swollen tonsil may completely hide the fragments of membrane in the crypts, when the throat is viewed in the ordinary manner; but if the spoon-handle be passed into the fauces, and the action of retching induced, the tonsil seems to start forward and open out as it were, disclosing the patches of membrane still lurking in its recesses.

The disease was chiefly found in the young; and, in the fatal cases, the age varied from 2 to 5 years. It appeared in the better-class cottages, as well as in the miserably dirty ones; in isolated houses as well as in those grouped together. Generally, no history of contagion could be obtained; but, in some cases, it could be clearly traced. In three families, every child was attacked, only excepting the baby in each.

As regards recurrence, one of the fatal cases had had a well marked attack five months before, and, in another decided case, there had been an equally well marked attack six months previously.

The household, of which the last mentioned case was a member, figures largely in my note-book; for, out of its eleven people, no fewer than eight have had "sore-throat" during the past two years; in some, when examined, membrane was present, in others not. Again, one of the eight has been under treatment four times, though no membrane was visible at any time when I examined her. These instances become of great interest when considered with reference to Dr. Gresswell's paper mentioned above.

With regard to albuminuria, in the few instances of slight attacks in which I tested the urine, I failed to find albumen, but, in the severe cases, it was usually present.

The sequelæ noticed were very few, for in only two cases was there paralysis of the soft palate (accompanied by oculo-motor paralysis), and in one or two other cases prolonged general weakness.

The district was a country one, though well populated, and the subsoil a heavy clay. No particular relation to weather or season could be detected.

I may add that, at times, there occurred numerous cases of ulceration of the mouth in children, the mucous-membrane of the cheeks opposite the basis of the tooth-crowns being the part usually affected. Once or twice I have seen a similar ulceration of the vulva. I was unable to establish any direct relation between these cases and those described as diphtheria, but they occurred sometimes in houses afterwards affected by diphtheria, and in some cases, at all events, appeared to be contagious, and to give rise to a similar attack in others.

PURE TEREbene IN WINTER-COUGH.

By J. HUTCHISON, M.D., Shawlands, Glasgow.

For some months past, I have been using pure terebene in the treatment of winter-cough and bronchitis. I have before me notes of fifty-one cases so treated, and the conclusions at which I have arrived from my experience of the drug are as follows.

In cases where the trouble has not been of long standing, and the symptoms are slight cough, more especially at night; expectoration moderate in quantity and easily voided; no feeling of rawness in the chest, and little or no disturbance of the general health, I consider that pure terebene is almost to be ranked as a specific, so quickly is a cure effected.

In cases where there is emphysema, and the ailment has been present for some time, it may be for some years, with the following symptoms: cough very troublesome, and sometimes even violent; expectoration tough and adhesive, or it may be easy and copious; great shortness of breath and rawness of chest; sleep broken, and general health much disturbed, the beneficial effects of the medicine do not manifest themselves for some little time, and not unfrequently the dose has to be increased to ten, or even fifteen, drops. If, however, the drug be persevered with faithfully and regularly, the cases are few in which I have to record a failure. Altogether, I consider pure terebene one of the most valuable remedies at our command in the above class of cases.

In six cases of phthisis in which I prescribed the drug, the patients, in every instance but one, remarked that they were not in any way benefited, and requested the medicine to be changed. In catarrh, also, the results were not satisfactory.

My method of prescribing the drug was sometimes pure terebene alone—10 drops on sugar three times a day. In other cases, I combined it with cod-liver oil, as follows: pure terebene, two drachms; cod-liver oil, to four ounces; two drachms three times daily. I could not say, however, that the effects produced were any better in the one case than the other. If there were any difference, pure terebene alone had the preference.

Some of the patients complained that the medicine made them sick; others that their appetite was improved by it. In a few of the cases, it appeared to have a laxative effect. In a very large proportion, drowsiness was complained of; while in some giddiness, or even a slight transient intoxication, was observed.

SEVERE LACERATED WOUND OF RIGHT LEG: TOTAL LOSS OF EXTENSOR POWER: SUCCESSFUL OPERATION.

By JAMES T. RUDALL, F.R.C.S. ENG.,
Consulting Surgeon to the Melbourne Hospital.

Miss Z., aged 16, was sent for my advice by Dr. Cutts on May 11th, 1885. Nine weeks ago, while tending some plants in a conservatory, she fell through a skylight and cut the front part of her right leg deeply, about two inches above the ankle-joint. She was placed under the care of a local medical practitioner, who, besides other treatment, applied sutures to the skin-wound; but, when the dressings were taken off and she left her bed, she was quite incapable of stepping or standing, except with the help of crutches.

Upon examination, I found in the situation before described a transverse depressed and adherent scar, about two inches long. She was unable to extend the foot, but could just perceptibly move the four smaller toes—doubtless by the action of the extensor brevis digitorum pedis. The scar was rather tender, but she had otherwise no pain. The tibialis anticus, extensor proprius hallucis, and extensor longus digitorum pedis, were quite without action, and it was evident that their tendons had been completely divided. The muscles of the calf were much wasted.

Although not quite without misgivings as to ultimate success, I strongly advised her parents to allow me to try what could be done, rather than let her continue permanently in such an unfortunate helpless condition.

The patient, having been taken to lodgings in Melbourne, on May 14th, was anaesthetised by Dr. Cutts; and, being otherwise assisted by Dr. F. Godfrey, I operated. Esmarch's bandage was applied, and the parts having been washed, and bathed with the antiseptic fluid, which I have found very reliable (sublimat 3/10, sodium chloride 3/4 per cent.), an incision about four and a half inches long was made in the front of the leg, just on the outer side of the tibia, crossing the cicatrix of the injury at right angles. The fascia was then divided for the same distance. The cicatrix was dissected up, and the tendons were sought for. The upper end of the distal portion of the tibialis anticus was densely matted in with the cicatrix. The lower end of the upper portion of the tibialis eluded discovery for some time, and it was reached only after lengthening upwards the incisions in the skin and fascia. The ends of the extensor proprius hallucis tendon were about two and a half inches apart, but were slightly joined by intervening connective tissue.

After separating the surrounding adhesions, and dissecting out the tendons, it was found impossible to bring down the upper part of the tibialis anticus to meet the lower portion. I therefore freshened the side of the lower portion of the extensor hallucis, and the upper end of the lower portion of the tibialis anticus, and united them by fine strong carbolised silk sutures, and then cut out about an inch of the connective tissue medium of the extensor hallucis, and joined the ends by silk sutures. The ends of the extensor longus digitorum pedis, after a small bit had been cut off from each, were fairly well brought together, and kept in contact by sutures. The previous separation was about two inches only, yet there was no trace of connective tissue developed between their ends. The operation-wound in the fascia was closed as nearly as was found possible by means of carbolised catgut sutures; but, after the extensive loosening of the subjacent parts by the dissection, this was by no means easy, and, indeed, could not be effected for the whole extent with precision.

After thorough washing with the antiseptic fluid, the skin-wound was closed by nine or ten sutures, two drainage-tubes being put in. The whole was well powdered with iodoform, and covered with salicylic wool (10 per cent.) a domet bandage being applied over all. The limb was then placed on a Neville's splint. A grain of opium

was given at night. On May 15th, she did not sleep much, but had a fair night without pain. Pulse 80; temperature 99.5°. Evening pulse 83; temperature 100.0°. After this the temperature never rose above 99.4°, and in a few days it became normal. On May 19th, the wound was dressed; it was healing; there was no pus. On May 24th, the wound was dressed, and the drainage tubes which, by pressure, had caused a little ulceration, were removed. The wound was washed with sublimate solution, powdered with iodoform, and a few adhesive straps were applied across.

On June 12th, all was soundly healed. On June 15th, the Neville's splint was removed, and a poroplastic splint was applied. She was allowed to get up, and in a few days she left Melbourne for her own home. On June 29th, massage, which had been ordered, excited a good deal of movement of the flexors of the toes, and she had distinctly more power of extending them. On July 9th, there was more power. The tendon of the tibialis anticus was thought to come up a little on stretching. She could raise the foot from the ground while standing up, which she could not do before.

On October 20th, I was almost as much surprised as delighted to see her walk into my room without stick, crutch, or any assistance whatever. The power regained over the foot was quite remarkable, although the toes drooped and turned inwards slightly when she took a step. A week later, the calf of the injured leg was barely half-an-inch less in circumference than the other. The tendon of the extensor longus digitorum pedis could easily be felt under the skin when the muscle acted. She could stand firmly on the injured leg, and she told me that she could walk "any distance."

REMARK.—It was to be expected that, in the absence of efficient means to keep them together, there would be found wide separation of the ends of the tendons divided by the accident, and that their lower portions would be closely adherent to the scar and its neighbourhood; it was therefore part of my plan in operating, not only to join the ends, but also to avoid lateral adhesion of the tendons to the tissues around them, and this was more or less well attained by antiseptic management, and by massage in the after-treatment, which, doubtless, also conduced towards the favourable result.

A CASE OF CHLOROFORM POISONING; RECOVERY.

By WILLIAM MARTIN, M.B., C.M., Stockton-on-Tees.

THE following case may be of interest. Between two and three o'clock on the morning of Sunday, March 7th, I was called to see a young man, aged 26, who was said to be in a "fit." The account given to me by his father was that he came home at 11.30 on Saturday night a little under the influence of liquor, but was able to speak and act correctly. The family retired to rest at twelve o'clock, but he remained in the sitting-room, saying that he was going to write a letter. Some time after this, his father called down to him, and, receiving no answer, he went down, and found him sitting on a sofa with one leg under him, his body and head bent over to one side, almost black in the face, and "salivating." Thinking he was in a fit, he laid him straight out on the floor in front of the fire, and came for me.

On my arrival, I found him, as stated, lying in front of the fire. He was breathing stertorously; his pupils were widely dilated; reflex action was completely abolished; temperature low, and pulse slow, very weak, and irregular. His breath smelt very strongly of what I thought was chloral-hydrate, and, therefore, I asked his father if he ever used it, but he did not know. His father, who is conversant with the use of drugs, then smelt his breath, and immediately declared he must have taken a dose of methylated chloroform, a large quantity of which was in the house, and which his father was in the habit of using; but he could not say how much had been taken out of the bottle.

As the case was serious, I called in the assistance of my principal, Dr. Dale, who at once recognised the strong smell of chloroform in his breath. The stomach-pump was applied; and, after pumping in fully a pint of water, he began to retch; and the tube being withdrawn, he vomited all the water. We could not be positive that there was a smell of chloroform in the vomited water, as the sour gastric smell was strong, and no doubt disguised it, and also because the room was so full of the vapour from his breath that, unless it had been very marked, we could not have detected it. As he was unable to swallow, we pumped in some strong coffee. Galvanism was used, but with no apparent effect. The character of his breathing changed rapidly. He would breathe stertorously for half an hour; for the next half hour he would breathe as if in a deep sleep; then the stertorous breathing would come on again; and so on alternately all through