town, has now given the people opportunities and means to pay visits to other parts, of which they constantly avail themselves; consequently, there has been less intermarriage, and less breeding in-and-in; and I am decidedly of opinion that, if the decrease of bronchocele take place in the same ratio as it has done in the last generation, ere another has passed away, endemic goitre will, in so far as Derbyshire is concerned, have almost disappeared.

THE TUNING-FORK IN DIAGNOSIS OF LESIONS OF THE INTERNAL EAR.

By P. McBRIDE, M.D., F.R.C.P.E., F.R.S.E.,

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UNTIL quite recently, it was—and by many aural surgeons it even now is—an accepted theory that, if the tuning-fork be heard by bone-conduction better in the deaf or deafer ear, the labyrinth is intact. To those who have followed the otological literature of the last few years, it must be known that this rule is by no means without exceptions. Twelve years ago, or more, Cassells, of Glasgow, published a case in which, after exfoliation of the left cochlea, the hearing power actually improved, and all the notes of the piano were perceived. More lately, Schwartze and Christenneck had under their care a patient who, in spite of the loss of the right cochlea, continued to hear the tuning-fork (C) by bone-conduction louder in the affected ear. Jacobson, too, has recorded a case in which, notwithstanding suppurative disorganisation of the cochlea, hearing by bone-conduction was retained until just before death. The last contribution towards this subject is by Gruber, who records an instance of exfoliation of the two upper convolutions of the cochlea, associated with only partial loss of hearing on the affected side and retained bone-conduction. Schwartze, in his recently published work, accepts frankly the position which alone is tenable—assuming, as we have every reason and right to assume, that these observations are accurate. According to this author, retained bone-conduction only proves the trunk of the auditory nerve and its centre to be sound, but does not necessarily imply a healthy condition of the labyrinth. But, even with this evidence before them, there may probably be found those who, on the ground that such facts are contrary to physiological common sense, will refuse them the consideration they deserve in clinical investigation.

The following is a brief record of a case which recently came under my observation. Mr. — some months since fell from a height, striking the right temporo-parietal region. He was stunned, and for two days could not stand. During this time, there was paresis of the right arm and leg. Giddiness was at first intense, and is still troublesome. His right ear has been deaf ever since. The tuning-fork (the large fork used by Politzer, furnished with brass clamps, and vibrating 512 per second), placed on the middle line of the forehead, was better heard in the right ear, and was also distinctly perceived from the mastoid of the same side. The same remarks also apply to a small fork of higher pitch. The giddiness is increased by turning from right to left, but not from left to right. The right ear is quite deaf, and even words spoken loudly through a conversation-tube are not heard. The drum-membrane on the right side was slightly depressed, but moved freely outwards on Valsalva's experiment—needless to say, without improving the hearing power.

Taking all the facts of this case together, we cannot but arrive at the conclusion that the labyrinth of the affected side was injured, either by concussion or fracture; and yet the hearing by bone-conduction was not only as good as, but even better than, that of the healthy ear. It did at first occur to me that a rupture in the continuity of the chain of ossicles might account for the symptoms, but the persistent giddiness could not be explained on this hypothesis.

This case, then, taken together with the evidence before adduced, proves to my mind that better hearing by bone-conduction is by no means certain proof of a healthy condition of the internal ear. It is well known and admitted that the converse proposition is also subject to numerous exceptions. Thus we meet with cases of chronic middle-ear catarrh, in which bone-conduction is interfered with, and which are readily amenable to treatment. In acute inflammation of the tympanic cavity, the same state of matters is often produced.

To discuss this matter in all its bearings would occupy too much space, and would, I feel, in the present state of our knowledge, be of but slight value. I cannot help, however, before I conclude, call-

ing the attention of those who are interested in otology, to the fact that the time-honoured tuning-fork test must now be considered as uncertain, whether in the positive or negative sense. No doubt it is a valuable aid to diagnosis, so far as we at present know, in a majority of cases; but then arises the question whether the number of exceptions may not increase more than we expect, as our knowledge augments.

LITERATURE.—Christenneck: *Archiv für Ohrenheilkunde*, Vol. xviii; Jacobson: *Archiv für Ohrenheilkunde*, Vol. xxi; Gruber: *Monatsschrift für Ohrenheilkunde*, etc., August, 1885; McBride: *Syphilis of the Ear and Throat*, *Glasgow Medical Journal*, 1885; Schwartze: *Die Chirurgischen Krankheiten des Ohres*, 1884.

DELUSIONS, THE RESULT OF INTESTINAL ACCUMULATIONS.

By A. E. BRIDGER, M.D., B.Sc. PARIS, ETC.

I PROPOSE to bring under notice the following case of mental delusion, dependent on intestinal accumulation, and its resulting reflex derangement.

My patient, a lady, about 50 years of age, was brought to me with the following history. She had been married for twenty-nine years, and had brought up a family of six children, all of whom were healthy; no miscarriages. Her general health had been remarkably good all through her married life; she had been a good wife, and an exemplary mother. She had passed the change of life without any marked nerve-derangement. Her family-history was good; no traces were discoverable in it of mental derangement, or of serious hereditary disease.

About a year ago, she began to lose appetite and flesh; her skin became harsh, dry, and yellowish in tinge; her digestive powers became greatly impaired; once or twice there had been some vomiting of blood, and a troublesome dry cough had developed itself. These symptoms led, on the part of her family, to a fear of consumption, which fear was dispelled by a medical examination. Remedies, however, failed to relieve her symptoms; and, about eight months ago, mental delusions began to show themselves. These at first took place invariably at night, and were, from first to last, of one class only—namely, that connected with taste and smell.

At first, two or three times a week, and of late nightly, the patient would complain that some one was burning sulphur or phosphorus in the room. She would get up frequently to search the room for a man who, she supposed, was smoking. She became impressed with the idea that her husband and children produced these smells, in order to annoy her, and, if possible, to kill her; and twice she had left the house, and remained away for days, in order to rid herself of her supposed persecutors. The smells, however, followed her wherever she went, and she came to believe herself the victim of a wide-spread conspiracy. About this time she began to refuse food, alleging that it contained poison, and that she could distinctly taste arsenic and sulphur in everything that was prepared for her. She accused the grocer, the milkman, the baker, and the butcher, of attempts to poison her, and communicated her suspicions to the police.

When brought to me, her condition was as follows. She was much emaciated, and disinclined to talk, had a stupid and spiritless aspect, a cachectic look of the skin, yellowish conjunctiva, etc. She made no special complaint, other than of the conduct of her friends. The bowels were said to be regular. The urine was thick, depositing lithates in abundance; no albumen or sugar. Examination of the special senses and of the chest resulted negatively. Inquiries about the abdomen elicited the fact that a sense of weight and of movement had latterly been much complained of, and I determined on making an examination of the part. On inspection, a curious state of matters became apparent. The position of the transverse and descending colon was occupied by a large elevated ridge, and the movements of the smaller intestine were distinctly visible through the thin abdominal walls.

It is scarcely necessary to add that the elevated ridge was produced by an immense collection of hardened feces, which it took several days, with the aid of spoon-handles, injections of glycerine, castor-oil, hot water, and the free use of mild aperients, to remove. The first scybalum passed was so large and hard, that it actually once seriously occurred to me to place the patient under chloroform, and extract it with Simpson's short forceps.

It is now six weeks since the accumulations were removed, and in that time the patient has increased wonderfully in weight. She eats

well, and sleeps well, and, most satisfactory of all, not a trace of her delusions remains. Her friends declare that she is in better mental and physical health than they have known her to be for the last ten years.

EPIPHYSITIS AFFECTING THE LONG BONES OF THE HAND.

By JAMES W. SMITH, L.R.C.P. LOND., M.R.C.S. ENG.,
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THE following case, affording, as it does, a contribution to the clinical history of bone-disease, is worthy of record. Moreover, very little, if any, allusion is made to such cases in the ordinary text-books.

C. L., aged 18, came under treatment in April, 1880, for disease of the proximal phalanx of the middle finger of the left hand. The bone was enlarged at its proximal extremity, tender and painful, but without any redness of the skin. The joint was quite free, the tendons were not implicated, and movement of the finger did not increase the pain. The swelling of the bone was most marked on the palmar aspect. The appearance was indicative of great periosteal thickening of the bone. Various remedies were used, including the local application of preparations of iodine, and the internal administration of iodide of iron. These measures had apparently the effect of retarding the disease, for it made no further progress for some time. The bone continued enlarged as before, but the pain diminished, and, as there was no impediment to the use of the hand, the patient ceased to attend. In February, 1882, he again came under treatment for the affection. The thickening of the bone had increased, the skin was red, and there was, in addition, distinct evidence of fluctuation. I made an incision, and then discovered that the case was one of central caries of the base of the phalanx. The probe passed into a cavity in the end of the bone, which was distended, blown out as it were. I scraped out the cavity well, and swabbed it out with nitric acid, put the hand on a splint, and resumed the iodide of iron internally. There was no attempt at repair, however; and, as the caries was extending up the shaft of the phalanx, and the joint between it and the metacarpal bone was becoming involved, and my patient's general health was suffering, I advised amputation of the finger; this I did in August, 1882.

The wound healed rapidly, and my patient resumed his employment. Two years afterwards, in May, 1884, he called upon me again, suffering from a similar affection of the metacarpal bone of the middle finger of the opposite hand, the right. The mischief was confined to the distal extremity, or epiphysis, of the bone, which presented the same symptoms as those he had experienced in the phalanx of the other hand, with the exception that the bone was not so much enlarged. The disease, in spite of treatment, very slowly but steadily progressed, fluctuation manifested itself, and I incised on October 9th, 1884. The probe passed into a considerable cavity in the head of the bone. The case was like the other—central caries. The entire head of the bone was hollowed out, and a very thin partition separated the probe from the joint, which, however, was unaffected. The patient was now in a much better state of health than on the previous occasion, and the cavity in the bone speedily filled up, and cicatrised. In February, 1885, he came to me again with a renewal of mischief. A residual abscess was forming in the recently cicatrised tissue. This, in due course, was opened, when the probe again impinged on dead bone. A tonic plan of treatment, and a few weeks' residence at the seaside, resulted in the complete healing of this sinus, leaving an indentation, but no shortening of the finger, and no impairment of the efficiency of the hand. He has since remained perfectly well.

The points of interest in the case are the following.

1. The disease had its origin in the epiphyses or epiphyseal cartilages, the disease manifesting itself in the proximal end of the phalanx, and the distal end of the metacarpal bone, the situations respectively of the epiphyseal cartilages.

2. The disease affected a symmetrical character; for, although this was not absolute, in the one instance a phalanx, and in the other a metacarpal bone being attacked, yet it was sufficient to be regarded as an essential feature of the disease.

3. Complete recovery took place in the metacarpal bone, without any shortening or impairment of the usefulness of the finger.

There was no evidence of syphilis, inherited or acquired, and the other members of the family are quite healthy. He gave an obscure history of injury.

The case bears additional testimony to the frequency with which bone-disease commences in the epiphyseal line, or in the epiphysis itself.

THE TREATMENT OF HÆMOPTYSIS.

By H. T. BATCHELOR, M.R.C.S., L.R.C.P., L.S.A.,
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IN considering the treatment of hæmoptysis, one naturally looks for the cause; but I think in the cause ought to be included the liability to bleed in the individual, that is, the constitutional liability, as well as the reason why he bleeds from the lungs. Bleeding is by no means an unfamiliar accident to which mankind is liable; but if we could select our bleeding ground, it would not be the lungs. But bleeding in itself ought to be regarded chiefly as an expression of a diathesis, whether it come from the nose, lungs, stomach, rectum, kidneys, or uterus; an expression of a diathesis aggravated probably by some error in diet or other temporary cause. I am not now referring to bleeding from ulcerated lungs or stomachs, etc., where a vessel is opened, and the treatment would best be met by a ligature if we could only apply it, but to the hæmorrhage which occurs suddenly in a person in good health, and from an apparently healthy mucous membrane. The diathesis which underlies the tendency to bleed has, by Mr. Jonathan Hutchinson, been shown to be the gouty. Fothergill's definition of gout is: "Gout is hepatic reversion—the formation of primitive urine products by a mammalian liver." If these two statements be accepted as correct, it follows that bleeding is due to functional derangement of the liver, or, to put it differently, dissolution from its normal and healthy development or imperfect evolution.

Now, I firmly believe that the tendency to bleed occurs with the gouty diathesis; and that the excess of uric acid in the blood, and the locality of the bleeding, is due to individual peculiarities. Most people in youth inheriting this diathesis bleed from the nose; later on in life, from the rectum or uterus; some of them from the lungs. Now those who do so from the lungs need not necessarily descend from phthisical ancestors; a badly formed thorax, interfering with due expansion of the lungs, may be a sufficient cause. But, apart from such considerations, and to come to treatment, I think such people are best cared for by being dieted. Alcohol and meat are pernicious. But, supposing such a person has an hæmoptysis, saline purgatives, diuretics, and diaphoretics, will best meet the case. But as these people are always very nervous, it is necessary to administer a nerve tonic. Opium may also be given; cannabis Indica is almost better. I quite agree with Dr. Samuel West in his remarks on profuse hæmoptysis published in the BRITISH MEDICAL JOURNAL of January 16th, 1886.

It is to my mind often amusing to read the experience of some as to the value of a particular remedy in the treatment of bleeding. It seems to be forgotten that bleeding naturally ceases when the vascular system is adequately reduced. This is Nature's method of saving the patient, and we cannot do better than imitate her. Bleeding, therefore, or dry cupping, or depressants, ought to be effectual aids as applied by us. Certainly, astringents imbibed cannot hold out much prospect of doing good. And as iron and opium also do not agree with these gouty people if continuously used, much care ought to be exercised in prescribing them.

Iron and digitalis I believe to be a particularly obnoxious combination. A man has an hæmoptysis, we will say, and he is given such a mixture. It is supposed that it stops the bleeding, whereas I believe the bleeding has stopped naturally. He continues with the mixture to prevent a recurrence, with frequently unhappy results. The iron impedes still more the already imperfectly acting liver, and the digitalis increases the tension in the already wounded vessel. It follows, then, that a recurrence may be naturally expected. Then, as to the bleeding from the lungs, the danger does not lie in the amount lost, but in the irritative changes it induces in the lung-substance. Now, it is believed that the cough must be allayed (and, to do this, opium is usually given), in order to prevent more bleeding. If it be accepted as true that the bleeding naturally tends to cease, I think we ought not to do anything to interfere with the expectoration of the effused blood. I am certainly of opinion that, if it be necessary to give opium continuously, in order to stop more bleeding, although the patient may not die of hæmoptysis, he assuredly will eventually of lung-inflammation. To give opium is truly a barbarous way of treating lung-affections. In order to explain an apparent discrepancy with a former statement, when I said that opium might be given to allay the vascular and nervous tumult, I wish to say that a single dose may be given for this object, but the continuous administration is hurtful. As I said before, I believe cannabis Indica the better of the two for this purpose.