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.

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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.

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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