As I have mentioned spirits of turpentine as a cure for iritis, as first recommended by Mr. Carmichael, it may be well to observe, that it is extremely useful when, by judicious mercurialization of the patient, the destructive progress of the disease is arrested, but, as happens not unfrequently, again recommences, notwithstanding that the patient's mouth is still sore, nay, though he may be salivated. Then it is, that spirits of turpentine often acts like a charm, and prevents the necessity of recurring to mercury a second time.—*Dublin Med. Jour.*

CONGENITAL DEAFNESS INCURABLE.

BY EDWARD J. DAVENPORT, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

IN the July number, 1836, of the American Journal of Arts and Sciences, has appeared an excellent article "on the late efforts in France and other parts of Europe to restore the Deaf and Dumb to hearing, by GEORGE E. DAY, late instructor in the New York Institution for the Deaf and Dumb." By a series of critical observations and deductions, drawn from the published works and reports of Itard, Deleau, and other eminent French Surgeons; and among the English, from Astley Cooper and Wright, Mr. Day proves, we think, to the satisfaction of every candid mind, that *Congenital Deafness cannot be cured.*

After observing, however, that it would be incorrect and discouraging to infer that the sense of hearing has never, under any circumstances, been restored to the deaf and dumb, Mr. Day, with a commendable candor, presents to the readers of the Journal an account of the small number of cases which have had a successful result. As these reports of well-authenticated instances of cure are not very voluminous, and as they may possess some interest to the medical profession, we beg permission to transcribe them from the article alluded to. When examined with reference to their details and their paucity of number, compared with the aggregate of deaf mutes, as derived from undoubted statistical returns, we are fully of opinion that they tend to confirm, rather than impair, the correctness of the result to which Mr. Day arrived. It is with feelings of chagrin and disappointment that we find ourselves, after a careful perusal of this article, compelled, from a respect to truth, to coincide in the opinion there expressed. Our personal experience, indeed, in the operation and the application of remedies usually adopted for the restoration of hearing in cases of confirmed deafness, is very limited.

In perforating the membrane of the tympanum some few times, with an improved instrument, formed partly from a model recommended by Professor Smith in his translation of *Saissy on the Ear*, though at first flattered by an apparent improvement in the state of the hearing, it was invariably found that the perforation healed up in the course of a few days, and was followed with a return of the previous deafness. And this occurred notwithstanding much care was taken to keep the perfora-

tion open, by introducing into the aperture portions of prepared sponge and other substances. Suppuration (sometimes slight) attended with more or less inflammation of the membrana tympani and adjacent parts, with the formation of granulations perceptible to the naked eye, always took place and healed the opening. The application of the nitrate of silver, or other escharotic, would no doubt be sufficient to destroy a portion of the membrane very effectually; but the extreme difficulty in duly restraining the action of these substances, especially when operating upon parts within such confined limits, and, above all, the small prospect of benefit even from a permanent opening in the tympanum, should justly deter any one from thus rashly experimenting upon the organ of hearing. It has been observed, indeed, and instances of this are not very uncommon, that persons who from accident or disease have had the drum of the ear ruptured or partially destroyed, yet retain a very considerable share of hearing. This occurs where the other parts of the auditory apparatus being perfect, the chain of little bones situated in the chamber of the tympanum, remains unbroken, and consequently able to transmit the vibrations of the air. For in cases of rupture of the membrane of the tympanum, it does not necessarily follow that this connection must be interrupted. Thus where this accident occurs from the concussion of the atmosphere consequent upon the explosion of heavy cannon, the chain of bones probably remains unimpaired. But to return to the cases referred to.

Case 1. To Amatus, of Portugal, we owe the first account of the cure of deafness when connected with dumbness. His observation, however, is by no means a full description. He informs us only that a child, who was dumb till twelve years of age, at the end of that period began to talk easily and plainly; and that her cure was owing to a seton applied to the back of the neck, which dried up in the course of time certain feculent humors (certaines humidités excrémentielles) with which the head was filled. Although he makes no mention of deafness, it is impossible to attribute her dumbness to any other cause. The supposition is confirmed by the fact that he relates it in connection with another case of accidental deafness.

2. The next observation was communicated to Lazarus Rivière, by Desgrands Pres, a physician of Grenoble. A wandering beggar arrived by night at Pousenac with his sick (deaf mute) child, who was suffering under a continued fever. For several days they were charitably entertained and provided for, but at length the father, despairing of the child's life, abandoned him to his fate and secretly left the place. The patient was, however, cured, and on his full recovery was employed to take care of the sheep. Some years afterwards, he received a blow on the occiput, which fractured the bone in several places; but the wound, under the care of an able surgeon, was fortunately healed. In proportion as the cure advanced, the sense of hearing recovered the exercise of its functions, so that the man began to mutter a few words, and in a short time he was able to hear and speak distinctly. This power he retained to the end of his life.

3. The third case is that of a young man, deaf and dumb from

birth, the son of a laborer of Chartres. At the age of twenty-four years, he suddenly began to speak, to the astonishment of the whole town. It was ascertained from him that three or four months before, he had heard the sound of the bells, and was extremely surprised by this new and unknown sensation; and that subsequently an aqueous discharge had taken place from his left ear, after which he heard perfectly with both. For three or four months he listened without speaking; this time he spent in repeating to himself the terms which he heard, and becoming acquainted with the pronunciation of words and the ideas attached to them. At the end of that period, believing himself sufficiently acquainted with language, he broke silence and began to speak, although very imperfectly.

Able theologians immediately questioned him with respect to his past condition, especially his ideas of God, the soul, and the moral quality of actions. Of these last subjects he seemed not to have the slightest notion. Although he had been present at mass, and had been taught to make the sign of the cross, he had neither attached any meaning to these ceremonies, nor understood the object for which they were practised. He had not formed a distinct idea of death, and in fact had never thought of it. He had passed a purely animal life, without a single idea, except those derived from the senses.*

4. An instance is mentioned by M. Varroine, a French physician in the suite of Lucien Bonaparte, in which the application of the *moxa* seems to have been successful. The patient was a young lady of Malaga, twenty years of age, who was born deaf. On carefully examining the organs affected, the tongue appeared to him a little thicker than usual. M. Varroine therefore regarding the deafness as the result of a simultaneous paralysis of the ear and *tongue*, applied two moxas; one on the back of the neck, and the other under the chin as near as possible to the root of the tongue. The two moxas, each of the diameter of a crown, produced, about the seventh day, a lively inflammation: an extraordinary swelling appeared on the anterior part of the neck, and extended down to the breasts, accompanied with a violent fever, which continued twenty-four hours, and ended in a copious perspiration. The eschars fell off on the twelfth or fourteenth day, and their loss was followed by a very considerable suppuration. The operator affirms that the tongue at this period was more free in its movements, and was *diminished in thickness*. In consequence of fumigations made in the *meatus externus*, the membrane lining it was excoriated and furnished, about the twenty-second day of the treatment, a thick yellowish humor, which flowed abundantly during six days; these depuratory efforts were succeeded by a voracious appetite, and increase of cheerfulness and intelligence. About two months and a half after the application of the moxas, the young lady, to her great joy and astonishment, began to hear the ringing of the bells. From that period her hearing continued to improve, and in a short time her deafness was completely dissipated. At the same time, her dumbness ceased, and when the mother of the young

* Histoire de l'Academie des Sciences, annee 1702.

lady communicated this happy result to M. Varroine, who had left Malaga, she articulated distinctly the words which she heard.

"In reading this observation," observes M. Itard, "it is impossible not to see the error of the author in supposing that he had a case of simultaneous paralysis of the organs of hearing and of speech to prescribe for. If, indeed, the moxa under the chin partly contributed to the cure of the deafness, in this case, the sympathy which exists between this region and the ear easily explains the whole secret of the success. *Paralysis* of the tongue never causes complete *dumbness*; the articulation is defective, but there are some sounds which are distinctly heard. The same thing is true of the paralysis of the muscles of the larynx, which never causes a total privation of speech. The utterance is indeed feeble and destitute of inflection, but yet is intelligible. The vocal organs, then, in the case above cited, were not injured, and the cure of the deafness was sufficient to restore them to their functions."

5. In the year 1786, a man named Felix Merle, a botanical physician, as he styled himself, appeared at the Institution for the Deaf and Dumb at Bordeaux, and commenced a course of treatment for deafness on all the pupils, amounting at that time to twenty-six or twenty-seven. It consisted in introducing, morning and evening, into each ear, a drop of a certain liquid of his own composition, which was kept there by a bit of cotton.

This treatment was continued a month, but with no effect, except in two instances. The first is that of a young lad, eight or nine years of age, who in infancy had possessed the power of hearing, and had become deaf by an accident, but who yet heard a little with one ear. On the twenty-third or twenty-fourth day of treatment, he experienced in both ears a very sharp pain. The pain gradually increased, till the introduction of the liquid into the *meatus auditorius* became insupportable; two or three days after the first attack, a purulent discharge took place in the middle of the night, from both ears; the child immediately began to hear more distinctly, so that the ear affected with total deafness occupied the place of that which had retained some little sensibility, and the sense of hearing in the latter was still more improved. Though the hearing was by no means perfect, it was sufficient to enable the child to learn to speak and to make use of language, which he has ever since retained. It should be remarked, however, that he has never heard or spoken as well as other men. The discharge from the ear, which continued only a few days, was not very copious and ceased spontaneously.

6. The second case in which this mode of treatment appears to have been successful, is that of a young lady, sixteen years of age, who was born with the organs of hearing in a sound condition, and at the end of fifteen or sixteen months began to talk. The mother of the child was in the habit of taking her to the vineyard in which she was employed, and leaving her on the grass at a time when the weather was damp, while she herself was at work. It was not remarked, at the time, that the child suffered any inconvenience; but soon after, it was noticed that instead of improving in hearing and speech, she appeared to have

lost both the one and the other. She had since remained deaf and dumb, and was making rapid progress from the instruction she was receiving in the Institution. About the twenty-fifth day of the treatment, she experienced in both ears a very sharp pain, which was so intolerable, especially when the liquor was introduced into the meatus auditorius, that she was obliged to be forcibly held. On the twenty-eighth day, while in school, she felt an inclination to sneeze, which was immediately followed by a simultaneous discharge from both ears of a large quantity of very fetid purulent matter. The perfect re-establishment of hearing took place immediately, so that the young lady experienced a feeling of extreme terror, and firmly clung to what was at hand, under the apprehension, as she afterwards said, that the house was about to fall upon her. By degrees this feeling left her, but her hearing continued the same. As soon as she heard, she forgot or at least had no desire to use the common signs employed by the deaf and dumb, and rapidly learned to speak. At the end of six weeks she was able to ask for everything that was necessary, and at the end of six months she spoke very well. Having at that time returned into the country, she lost somewhat of her facility in speaking. The discharge from the ears continued fifteen days or three weeks, and ceased shortly after.

Of the six cases of cure cited above, one was spontaneous, and the remaining five were produced by extreme irritation of certain parts of the head, by means of the moxa, the seton, a certain aqueous composition introduced into the ear, or a blow on the head.

All these remedies, including the liquid preparation* of Felix Merle, were employed by M. Itard a sufficient number of times to test abundantly their efficacy, but without the slightest success. In one case, however, hearing was partially restored by the application of the *actual cautery*, a remedy similar to the moxa. It was applied on each of the mastoid processes, with an iron heated white, and this was shortly followed by a copious suppuration, at which time signs of the re-establishment of hearing began to be observed; but it was eighteen months after the operation before he pronounced words. In three other cases of congenital deafness, however, in which it was employed, it was not attended with the least benefit. One other case, the result of disease, was cured chiefly by the application of blisters; but in *forty cases* in which the same treatment was subsequently employed, no similar instance occurred.

The writer of this article gives, next, an able exposition of the results of the two principal *operations* relied on for the removal of the material causes in the ear, which prevent the free admission or circulation of sounds, viz. the *perforation of the membrane of the tympanum* and the *injection of the eustachian tube*. We regret that our limits do not allow us to follow the author in his examination of the facts and observa-

* For the information of the profession, we subjoin the formula of this preparation.

R. Pulverized Asarabacca,	two drachms.
Rose Leaves,	one pinch.
Horse Raddish,	one drachm.
Parsley Pert, or stone break parsley,	one pinch.
White Wine,	eight ounces.
Boll to one half, strain and add	
Sea Salt,	two drachms.

tions drawn from the highest authorities in England and on the continent, respecting the total failure of these operations. The evidence in favor of the opinion of the incurable nature of cases of congenital deafness, is concluded with the report of M. Itard "on the advantages which might reasonably be expected from various remedies, if employed on a large number of patients." This was drawn up at the request of the Council of Administration of the Royal Institution for the Deaf and Dumb at Paris; and no man in Europe was better prepared to make such a report than Itard. For nearly thirty years he had been at the head of the medical department of the Institution at Paris, and during that time had been unwearied in his efforts to restore the deaf and dumb to hearing. He had made himself acquainted with all that had been known by his predecessors on the anatomy and diseases of the ear, and had written the most elaborate work which had ever been published on this difficult subject.

In consequence of his report, it was decided that a certain number of deaf mutes in the Institution should be subjected to medical treatment. As nearly every remedy had been employed in vain, Itard determined to make a thorough experiment of the utility of injecting the eustachian tube. He therefore performed the operation in *one hundred and twenty* cases, the results of which were, to use his own language, "just nothing, with regard to hearing, in the great majority of the mutes, and in the rest, temporary and of little advantage."*

In conclusion, we earnestly commend the remarks in the Journal of Arts and Sciences to the attention of those members of the profession, who, instigated by a mercenary thirst for gain, or by a despicable desire of notoriety, deceive the public with accounts of fictitious cases, and of cures equally imaginary.

Boston, August, 1836.

BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, AUGUST 10, 1836.

A NEW VOLUME OF THE MEDICAL JOURNAL.

WITH this number commences the FIFTEENTH VOLUME of the Boston Medical and Surgical Journal. While we are reminded by it of the ceaseless march of time, we desire to express to our numerous patrons the obligations we owe them for their sustaining power. Since we commenced this publication, wonderful changes have taken place in the circle of our earliest medical friends and associates. The grave now conceals more than sixty personal acquaintances and talented correspondents, who have contributed in some way to these pages. How melancholy the reflection, that such a combination of intellect, exerted for the highest moral as well as physical benefit of man, should have been sealed up in death, in some cases even before the frost of age was discoverable !

* Deuxième rapport, lu, le 9 février, 1827, au Conseil d'Administration, etc. P. 11.