

Following up this idea he requested the conductors of the clinic to save up for him the bodies of those children who had undergone craniotomy and yet had phonated during life, as well as those monstrosities who had phonated.

As a result of this request he received in the course of two years, two children who had undergone craniotomy and two monstrosities who had phonated. A careful examination of these cases showed that, in each of the children on whom craniotomy had been performed the region in question was intact. In the two monstrosities, while most extensive cerebral and cerebellar maldevelopment was present, yet the region in question was developed in both instances.

Two reports are also referred to where observations were made during life and a careful examination of the nervous centers made after death. These cases of Darvas and Prof. Kehrer were a monstrosity and a perforated child. The results of both bear out the views of the author.

The author makes the following statements:

1. Destruction of the cortical phonation centers has no influence on phonation.
2. The destruction of the great ganglia of the brain, the thalamus, the corpus striatum and the nucleus lentiformis does not influence phonation.
3. The total division of the brain in the plane of the anterior corpora quadrigemina does not destroy phonation.
4. The lesions of the cerebellum have no influence on phonation.
5. The total division of the medulla oblongata above the origin of the vagus arrests phonation at once and permits only respiration.

As a result of his experiments on animals and his investigations on monstrosities and perforated children, the author sets up the following thesis:

"That the subcerebral phonation center which we have demonstrated to exist in the dog also exists in the human being, and further, it is similarly situated between the posterior corpora quadrigemina and the origin of the vagus."

VITUM.

### **A Case in which a small Silver Coin was lodged in the Larynx for Four Weeks; Removal with Forceps under Cocaine—**

WALKER DOWNIE—*Lancet*, October 14, 1899.

It is somewhat surprising that the coin in the following case did not cause more dyspnea, obstructing as it did the rima glottidis to so great an extent. Had it been allowed to remain much longer in the larynx, it would have led to ulceration, which might have given rise on healing to such contraction as to have interfered permanently with speech. From a consideration of 1,674 cases of foreign bodies in the air passages collected from various sources, Bosworth\* has shown that 28.6 per cent of the patients when no operation was performed died, and 25 per cent died after operation.

\* "Diseases of the Nose and Throat," third edition, p. 729.

A man, aged forty-six years, was seen by the author at the Western Infirmary, Glasgow, on September 8, 1899. The patient complained of loss of voice and difficulty in breathing, particularly on exertion, of four weeks' duration. The story which he gave was that on August 12th he was intoxicated. In the early part of that day, while sober, his voice was clear and he had no difficulty in breathing, but on waking up on Sunday morning he could only speak in hoarse whispers, he had considerable pain over the larynx, his respirations were noisy, and he felt as if his windpipe was closing. These symptoms were supposed to be due to a "bad cold," and the use of many homely remedies was accordingly resorted to, without, however, giving him any relief. His nephew, who had been with him on the previous night, told him that he had swallowed a "threepenny-bit," but the patient had no recollection of the alleged occurrence, and maintained that he had done nothing of the sort. (This latter statement was not made until after the coin had been removed.)

On laryngoscopic examination the parts were found to be deeply injected. Both ventricular bands were swollen and inflamed. The greater part of the glottis was seen to be occupied by a flat body thickly covered with muco-pus. The body lay on the vocal cords so that their extremities, anteriorly and posteriorly, alone could be seen. This foreign body was then gently mopped over with a swab of cottonwool on a laryngeal probe, after which its nature was recognized without difficulty. Although it had lain in the larynx for four weeks, the metal for the most part was bright, and the raised edge and the figure in the center of the threepenny-piece were readily seen in the mirror. The interior of the larynx was anesthetized with cocaine, and the coin was at once removed by means of Mackenzie's rectangular laryngeal forceps opening antero-posteriorly. Flat foreign bodies fixed in the position which this one occupied are most readily extracted by forceps of Wolfenden's pattern, but on this occasion none were at hand. After the removal of the coin the upper surface of both vocal cords was seen to be eroded. This erosion quickly healed under the influence of soothing inhalations, and within one week from the date of the removal of the threepenny-piece the patient had fully recovered his voice, and all symptoms of the laryngeal distress complained of while the coin was lodged within the larynx had disappeared.

STCLAIR THOMSON.

### **The Theory of Abdominal Breathing in Singing—P. HELLAT—**

St. Petersburg—*Archiv für Laryngologie, Band ix, Heft 3.*

The author takes issue with the older writers who held that the diaphragm was the chief factor in abdominal breathing, and in singing accomplished its object by compressing the air in the thorax into the upper part of the lungs, so that a strong and steady stream would issue from the larynx during tone production.

Another view involved the "lutte vocale" where certain muscles antagonized one another, thereby producing the strong and steady stream of air which was supposed to be the object of abdominal