

at times of nausea, the fingers are passed backward, the worm seized and withdrawn. They also find their way into the Eustachian tube, the nose and the larynx, in the latter case death ensues rapidly from suffocation.

Santonine is the common remedy; calomel has vermifuge properties even alone, but it is a good addition to santonine. *Chenopodium* or worm seed is good. It is usually given in the form of oil. It is seldom however used on account of its disagreeable odor and taste. The fluid ext. of *spigelia*, better known as pink root, is a very excellent vermifuge. It should be given in dose of one to four drachms.

AMPUTATION OF THE TONGUE.

BY THE INTRA BUCCAL METHOD BY MEANS OF THE GALVANIC CAUTERY.

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Patient, a middle-aged man, well-nourished.

Case.—On the edge of the tongue, near its root, on the right side, on a level with the last molar, is a fungoid ulcer, which rests on a hard and tumified base. It is surrounded by a number of granulations. Fortunately, the glands in the vicinity are not involved.

Some ten months ago the patient experienced a burning sensation on that part of the tongue while smoking, a small pimple followed, accompanied with occasional lancinating pains.

Preliminary tracheotomy was performed seventeen days before operation. He took cold and some tracheo-bronchitis followed, from which the patient had not entirely recovered at the time of the operation. The operation took place on the 9th of April, the galvanic cautery being used. The patient came under the chloroform readily, then suddenly stopped breathing, instantly. I sprang on the operating table, seized my patient firmly by the legs, and hung him head downwards, whilst Dr. Vernial practised artificial respiration, (I was assisted by Drs. Vernial, Meurisse and Nelson.) The syncope yielded readily to the above treatment, when I proceeded with the operation. Bunsen's modified cells were used, twenty small elements were brought together in series of four, the five series being connected. The patient's mouth was kept open by Charrière's *ouvre bouche*.

The lips and gums were protected by pledgets of wet cloth secured by elevators. When all was ready a platinum wire, with a diameter of seven-tenths of a millimetre, was passed through the tongue by means of Reverdin's half-curved needle, passing it obliquely before and behind the sore, from right to left, then from below upward; thus the needle entered on a level with the root of the tongue near the floor of the mouth, in the posterior third of the right side of the organ. The ends of the platinum wires were connected with the respirators. The wire played on the middle part of the dorsal surface of the organ. The current was turned on; the loop, under delicate traction, cut its way out. The section was made slowly, and at times when the current was too intense, as shown by a greater incandescence, it was modified. A second wire was passed horizontally towards the base of the organ, using the same needle, commencing at the level of the first incision, and coming out behind the hardened growth. Under gentle traction, the second section was completed. The third and last section was destined to sever the growth from the base of the tongue on the floor, in its mouth being its only remaining attachment. This section was a transverse one and completed the removal of the diseased parts.

The sections were as clean cut as if done by a bistoury. There was no hæmorrhage. The eschar was slight and almost imperceptible.

Following the operation a careful examination of the tongue was made, to make certain that the whole zone of disease had been removed. After treatment: ice in the mouth and borax lotion.

Remarks.—If we wish to avoid primary and secondary hæmorrhages while making the regular sections, it is necessary to proceed slowly and with the greatest caution.

The patient's temperature on the evening of the operation was $37^{\circ}4$. C. He was feeling very well. He was discharged from the Canal Hospital on the tenth day. Following the operation there was some difficulty in articulating, later the man spoke fairly well. The section removed was somewhat triangular in shape and made a large hole in the tongue.

(*Translator's Note.*) I saw the man some months after the operation, when he was in excellent health. He was delighted with the results, and loud in his praises of Dr. Girerd's skill. The impediment to speech was very slight.

W. N.