

*Observations on the Structure of the Tongue ; illustrated by Cases in which a Portion of that Organ has been removed by Ligature. By Everard Home, Esq. F.R.S. Read February 3, 1803. [Phil. Trans. 1803, p. 205.]*

These observations will be allowed to have a considerable degree of importance, when we find that they ultimately lead to a safe and effectual method of removing a portion of the tongue, when that organ has assumed a diseased action or morbid excrescences of a cancerous nature, to which this, as well as many other glandular structures, are known to be liable. In a physiological view they will likewise be found to merit particular attention, as they tend to prove that the internal structure of the tongue is not of that delicate and sensible nature which, from its being the organ of taste, we should be led to imagine.

The first case here mentioned, and from which various inferences are derived which lead to a new mode of treating the disorders of the tongue, was that of a gentleman whose tongue had been accidentally bit near the tip, and had hence become completely insensible, insomuch that every article of nourishment he took was equally insipid, and that the tip felt like a bit of wood in his mouth. No degree of inflammation, however, or spasmodic tendency having accompanied these symptoms, Mr. Home inferred that the nerves supplying this, and perhaps the other organs of sense, are not so liable to irritation as those which belong to other parts of the body.

Encouraged by this observation, he in three instances performed a new operation upon the tongue, which consisted in removing a portion of that organ by means of ligatures, and with that portion certain fungous excrescences which might have been productive of fatal consequences. The first patient was a boy eight years of age, who had been born with a small excrescence on the right side of the anterior part of the tongue. It had been removed no less than eleven times by ligatures round its base, caustics and amputation, but always with considerable and dangerous hæmorrhages; and after all without success, the fungus always reappearing soon after the operations. Mr. Home at length resolved to take out the portion of the tongue upon which the fungus grew. This was effected by passing a crooked needle, armed with a double ligature, through the substance of the tongue, somewhat within the excrescence: the needle was drawn out below, leaving the ligatures, one of which was tied very tight before the excrescence, and the other equally so behind it, so that a segment of the tongue was confined between these two ligatures, in which the circulation was completely stopped. On the fifth day after the operation this portion of the tongue came away with the ligatures, leaving a sloughy surface, which likewise separated on the fifteenth day. The excavation a few days after this became completely cicatrized, leaving only a small fissure on that side of the tongue.

The two other operations were performed on persons above forty

years of age. In these cases the excrescence was a tumour no larger than a pea, but the appearance of which threatened the formation of a cancer. Both these were successfully removed by the ligatures above described; and, except a small fissure, no kind of deformity was left upon the tongue.

The principal inference derived from these operations is, that the internal structure of the tongue is less irritable than almost any other organized part of the body; and that therefore the peculiar substance which is interposed between the fasciculi of its muscular fibres is not in any respect connected with the nerves which pass through its substance to the organ of taste, but is merely a soft medium, which is intended to facilitate the action of the organ in its different parts. It also appears from these observations, that the nerves of the tongue may be more easily compressed and deprived of their power of communicating sensation than nerves in general; and that an injury inflicted on them is not productive of any diseased action in the trunk of the injured nerve.

Lastly, the advantages to be derived in the practice of surgery from the success of these operations, are briefly stated; and indeed the removing with safety the whole part of a tongue which may have taken on a disposition to be cancerous, will easily be allowed to be a most material improvement in that important branch of the medical profession.

*Observations of the Transit of Mercury over the Disc of the Sun; to which is added, an Investigation of the Causes which often prevent the proper Action of Mirrors. By William Herschel, LL.D. F.R.S. Read February 10, 1803. [Phil. Trans. 1803, p. 214.]*

Concerning the transit of Mercury, as the times at which the observations were made were not the chief object of the investigation, the detail here given is only to be considered as denoting the order of their succession. When the planet was first seen on the disc of the sun on the 9th of November last at about 40' after seven in the morning, it was easily distinguished from the openings in the luminous clouds generally called spots, its perfect roundness being sufficient to point it out, had its place not been previously known. As the morning advanced, its termination became by degrees still more accurately defined; and the corrugations of the luminous surface of the sun were visible up to the very edge of the planet. Near the egress, when the sun and planet were nearly in the meridian, particular attention was paid to the appearance that was thought to indicate an atmosphere round Mercury; but nothing of the kind could be perceived, its periphery remaining sharp and well defined to the very last. It was also observed that the appearance of the planet, during the whole transit, never deviated in the least from the spherical form; whence it is inferred, that unless its polar axis should have happened to be situated in a line drawn from the eye to the sun, the planet cannot be materially flattened at its poles.