Mr. Thomas Bryant,¹ in a lecture delivered before the Royal College of Surgeons in 1888, mentioned two cases of cystic tumours of nerve.

The first is described as a cystic tumour of the size of half a hazel nut, which was enucleated from the sheath of the median nerve above the anterior annular ligament. This swelling had given rise to pain over the distribution of the median nerve in the hand.

The second case is that of a cystic tumour within the sheath of the upper cord of the brachial plexus, which caused pain chiefly over the distribution of the musculospiral nerve; removal of the swelling was followed by recovery. Mr. Goodheart reported that it seemed to be a blood cyst. This specimen is preserved in the museum of Guy's Hospital, and appears to be a fibrous-walled cyst containing blood clot.

A remarkable case of multiple neuro-fibromata affecting the nerves both within and external to the spinal canal, some of the tumours being cystic, is recorded in the *Transactions of the Medico-Chirurgical Society* by Mr. Septimus Sibley.² The largest of the many tumours was situated upon the anterior crural nerve, the capsule being continuous with the sheath of the nerve. "On section the tumour presented the appearance of a fibro-cellular tumour interspersed with cysts, the fibrous portion being chiefly collected in one part, and the cystic portion in another. All the smaller cysts were filled with clear serous fluid, the cysts being formed by a thin, smooth fibrous wall. The largest cyst was nearly filled with partly organized blood clot. A second cyst, the size of a walnut, was filled with yellowish gelatinous or colloid substance." This specimen is preserved in the museum of Middlesex Hospital.

In the museum of St. Bartholomew's Hospital is a specimen which was obtained from the dissecting room, and consists of a portion of the inferior articular branch of the external popliteal nerve, which shows two small thin-walled cysts in the course of the nerve.

In the case of the cervical nerve cyst recorded above, although examination of the specimen does not give any definite indication of its origin, it seems probable that the cyst arose from a fibro-neuroma which had been present for many years before undergoing cystic change. The examples quoted seem to show that such a condition does occur.

My thanks are due to Mr. Butlin for his kind help and for his permission to publish this case.

REPORT BY MR. E. H. SHAW.

The specimen consists of a unilocular ovoid cyst measuring $2\frac{1}{2}$ in. in its vertical length by 1 in. in transverse diameter. Its wall is thin and composed of strong fibrous tissue; it is strengthened in places by rather thick plaques, which fade gradually away on to the thinner parts of the wall. The inner surface is smooth and pale, like an ordinary endothelial surface. The outer aspect of the cyst wall is composed of loose connective tissue, and numerous blood vessels are seen traversing its surface. A nerve is seen at the upper part of the specimen; it gives off a number of small branches which spread out and soon become incorporated with the outer part of the cyst wall; the remainder of the nerve passes on and becomes lost in the lower part of the wall.

Microscopic sections were made of various parts of the cyst wall. One through a thickened patch reveals dense fibrous tissue arranged in irregular wavy lines with very few cells; it reminds one of the appearances presented by the cornea and the thickened patches seen on the spleen in perisplenitis. No lining of endothelial or other cells is visible; the outer part of the wall is composed of loose fibrous tissue containing numerous blood vessels and many spindle cells. Several small nerve bundles are also seen.

Another section of the lowest part of the cyst wall shows an inner dense fibrous layer, much thinner than the first part, and an outer layer of fibrous tissue thickly packed with spindle and oval cells. Several nerves are seen surrounded by these cells, and are cut in various planes. Many large blood vessels are present in both parts of the wall, and in several places collections of blood pigment are visible—old blood extravasations.

In a third section the separation into inner dense fibrous tissue and outer loose fibrous tissue is not so abrupt, and many more spindle-shaped cells are seen in the inner part. Several flattened cells can also be seen on the internal surface; these are evidently endothelial in character.

Origin of the Cyst.

It is difficult to prove whether the cyst is due to dilatation of connective tissue lymphatic spaces in one of the nerves or to the same change occurring in the neighbourhood of the nerve and implicating it by extension and pressure. The close relationship existing between the cyst wall and the surrounding

nerves, seen both macroscopically and microscopically, suggests strongly that it has arisen in the connective tissue of a nerve.

On the other hand, lymphatic cysts do occur in the neck, and it is possible for such a cyst to cause trouble by pressure on the adjoining nerves. These cysts, however, are usually multiple, occur in young people, and may become very large and numerous without involving the nerves. A third possibility is a cystic change occurring in a fibro-neuroma; there is no macroscopic tumour remains in this specimen, but the presence of the numerous spindle-shaped cells in the second section might lend support to this suggestion.

REFERENCES.

¹ *Lancet*, 1888, vol. i, p. 1232. ² *Med.-Chir. Soc. Trans.*, vol. xlix, p. 39.

TRACHEOTOMY DURING THE ADMINISTRATION OF NITROUS OXIDE GAS.

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The following incident occurred during a dental operation upon a patient, a man aged 24, who was suffering from multiple osteo-arthritis. Most of the larger joints were markedly affected, including both mandibular joints to such an extent that the teeth could be separated only by about one-third of an inch. The teeth were in a very bad condition, with the exception of a few in the front of the lower jaw they were all decayed to the gum level. It was thought advisable in the treatment of his condition that all these stumps should be removed, and the mouth put in as healthy a state as possible.

Nitrous oxide was administered for this purpose, the intention being to remove the more accessible stumps towards the front of the mouth on the first occasion so that, at a subsequent administration, those at the back could be more easily removed. Previously to the administration it was found that, although the free passage of air through the mouth was somewhat limited by the fixation of the lower jaw, nasal respiration was perfectly free.

Anaesthesia was induced in a normal manner by the nasal method, and one root had been removed when slight cyanosis was noticed, which continued to increase in spite of the admission of air. The administration was at once discontinued, but respiration ceased entirely. The mouth was opened with a Mason's gag, and the tongue drawn forward; no obvious obstruction could be felt by the finger in the pharynx, which was sponged out, large quantities of very viscid mucus being present.

The patient was placed on the floor and artificial respiration performed, but it was obvious that there was laryngeal obstruction, as no air passed into the chest; therefore tracheotomy was immediately performed and artificial respiration continued, air passing freely through the opening through which oxygen was administered. After a very few compressions of the chest natural respiration was resumed, the patient's colour rapidly improved, and he soon recovered consciousness.

In view of the condition of affairs, the problem of the removal of the teeth was solved by administering chloroform next day through the tracheotomy tube, the pharynx being plugged with a sponge; after all the stumps had been removed, the tracheotomy wound was closed, and the patient made an uninterrupted recovery.

The interesting feature of the case was that although the mouth was opened, the tongue drawn forward, and the pharynx sponged out, complete laryngeal obstruction persisted, which appeared to be due to congestion of the tissues around the epiglottis, the tongue and neighbouring soft parts being much swollen; immediately the asphyxial symptoms were relieved by tracheotomy, the swelling subsided, and the patient could breathe through the natural passages.

WE observe that at Whitehaven, as on the occasion of nearly all mining disasters, the medical profession played its usual but commonly unrecognized part, Dr. C. J. J. Harris of Whitehaven being mentioned among those who formed the first rescue party to descend. The accident, besides being one of the worst on record in point of loss of life, has not even the advantage of affording any hint, apparently, as to how mining operations may be rendered less perilous. When a mine catches fire all ordinary aids to rescue work are set at naught, and while the dangers attending it are greatly increased the chances of material success are reduced to a minimum.