

A CASE OF SUBCUTANEOUS SURGICAL EMPHYSEMA. AN UNUSUAL COMPLICATION FOLLOWING THE REMOVAL OF FAUCIAL TONSILS.*

BY BENJAMIN D. PARISH, M. D., PHILADELPHIA.

A. B., male, aged 28, married, was first seen by me last June about ten minutes after an operation for the removal of faucial tonsils, under ether anesthesia; tonsillotome and tonsil punch being the instruments used.

I was hurriedly summoned to see this patient because of alarming symptoms developing while being carried from the operating-room.

The operator, who has kindly permitted me to report this case and to whom I am indebted for some of the following facts, stated that the patient left the operating table in good condition, and that there was nothing unusual about the operation, except possibly more bleeding than usual. In dissecting the tonsils free a small right-angle knife was used. The tonsils were quite adherent, and in freeing them a small button-hole was made in the lower part of the posterior pillar of the faucies on the left side. The orderly and nurse noticed on the elevator that the patient seemed to be struggling to breathe, and also that his neck and face were swelling rapidly, and immediately summoned the resident and operator.

When I first reached the case the breathing was rapid and shallow; pulse about 128 and thready; face livid and lips cyanosed; his head and neck were extended far back and quite rigid; skin cold and moist. The entire neck puffed out so that the line of the jaws were practically obliterated, both cheeks and right eye-lid swollen, and the crackling of emphysema easily detected over this entire area as far down as the last rib anteriorly, but none posteriorly.

After prying open the jaws, putting on a tongue-forceps and bending the head and neck forward the general condition became rapidly better. Stimulants and enteroclysis were administered.

It was noticed that the emphysema which had been increasing with the neck in the extended position remained stationary when flexed. An examination showed no evidence of any injury to the larynx or trachea. The faucial tonsils had been well removed.

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There was a small button-hole in one left pillar, as before mentioned.

No hemorrhage or unusual condition of the pharynx was seen. The small blood-clots at the field of operation were not removed. The nares showed no signs of injury. Dr. D. J. McCarthy, who was called in at the same time, stated the chest condition to be negative. The patient rallied from the shock, his respiration became again normal, and in about three days the emphysema had been absorbed from neck and face, though it took two weeks to disappear from the chest. The patient made an uneventful recovery.

What appealed to me of interest in reporting this case was, first that subcutaneous emphysema was an unusual complication of tonsil operations, and, secondly, just how the air got into the subcutaneous tissues. As a complication, I have been unable to find any case so reported in the last ten years.

F. STEWART, in the *Lancet*, for November 15, 1902, reports a case of blood extravasation into the subcutaneous tissues of the neck, cheeks and sternum, twenty-four hours after removal of the faucial tonsils from a boy 7 years old, death resulting. A. S. Woodwark, in the *Brit. Med. Jour.*, London, 1908, reports a case of "Surgical Subcutaneous Emphysema" of head and neck following trauma, due to the breaking of a pipe stem and the perforation of a piece just above the anterior pillar of the fauces on one side. I mention these two cases merely to illustrate the possibility of air and blood being injected into the subcutaneous tissues by separation of the musculature and connective tissues external to the faucial tonsils.

The field of the operation in this case did not show that the operator had gone unduly deep in removing the bases of the tonsils, or in any way could he be held responsible.

The explanation of just how the air reached the subcutaneous tissues is more theoretical than demonstrable. Taking for granted that we have excluded injuries to the nose, trachea and larynx, we must look next to the field of operation as the probable portal. As we know, the tonsil lies between the palato-glossal and palato-pharyngeal muscles, and upon the superior constrictor of the pharynx. The small button-hole in one of the pillars may have been the seat of entrance, but it seems more likely that there may have been a separation of the fascia and muscles of the superior constrictor of the pharynx. Parallel to the carotid vessels, according to Gray,

a thin lamina of the fascia is given off, called the bucco-pharyngeal fascia, which closely invests the constrictor muscles of the pharynx and is continued forward from the superior constrictor on to the buccinator, and it may have been along this course that the air traveled. That the emphysema did not occur until the patient was coming out of ether was probably due to the fact, that then the mouth was tightly shut and the struggling expiratory efforts of the patient forced the air through the opening into the subcutaneous tissues. Support is added to this theory by the fact, that as soon as the mouth was kept open and the neck flexed the emphysema ceased to increase.

Such a complication as the one in this case, though uncommon, is most unpleasant as well as alarming to the operator, and emphasizes the dangerous element in tonsil operations.

In whatever way the air entered the tissues the fact remains that the patient was in a distinctly precarious condition for a short time. If the air had entered any of the mediastinal spaces the result might have been far more serious.

29 South Nineteenth Street.

Mouth-Breathing. M. A. DIEMONT. *Dublin Jour. Med. Sci.*, Sept., 1910.

This paper represents a thesis for the degree of Doctor of Medicine and is occupied for the most part with an account of the well-known causes and results of nasal obstruction. Attention is especially drawn to the naso-pharyngeal catarrh, which is so often caused by the presence of adenoids and is associated with chronic engorgement of the inferior turbinal with hypertrophy of its posterior extremity. The latter is held by the author to be a very frequent result of adenoids, and in his opinion the posterior ends must in such cases be removed at the same time as the adenoids, if complete recovery is to be procured. The catarrhal condition extends more over to the accessory nasal cavities, whose orifices become closed by swollen mucous membrane, while the secreted fluid is unable to escape and is "liable to give rise to abscess."

GUTHRIE.