Prolapse of Ventricle of Larynx in Case 2.

PROLAPSE OF THE VENTRICLE OF THE LARYNX.

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Two cases of prolapse of the ventricle of the larynx have recently been examined at the Mayo Clinic. This unusual condition was first noted post-mortem in 1868 by Moxon¹ in a case of carcinoma of the stomach in which there had been during life no symptoms referable to the larynx. In 1876 Lefferts² recognized the condition, performing a thyrotomy for the removal of a tumor which was found to be a prolapse of the ventricle. The following is a report of our two cases:

Case 1 (111259): R. J. W., a salesman aged 71 years, came to the clinic July 23, 1914. His trouble began five years before with a cough which persisted for three years, when a gradual onset of hoarseness was noticed. Three years ago he consulted a laryngologist "who clipped a small growth from the soft palate." The cough cleared up, but the hoarseness persisted and became much worse the last six months. He was unable to talk above a whisper, his nutrition was fair, his weight, 131 pounds, without loss. He had no pain nor dyspnea.

Examination: Systolic blood pressure 105, diastolic 65. There was moderate chronic bronchitis without sputum. The roentgenogram showed considerable bronchial thickening. Wassermann negative, examination of the nose and throat negative except for the laryngeal findings. A smooth, globular tumor with a broad base was seen emerging from under the anterior two-thirds of the right false cord and hanging into the glottis. There was no paralysis of the vocal cords, but the tumor prevented their approximation. The larynx was otherwise quite normal. The tumor was easily indented with a probe and could be readily tucked back into the ventricle. A diagnosis of prolapse of the ventricle was made. The patient was unwilling to be operated on and returned home.

Case 2 (123481): J. B. M., a man of 59, came to the clinic January 27, 1915. He had noticed hoarseness following a cold but this had previously subsided. For the past six months, however, he had had hoarseness and coughing. The last few days the hoarseness had become worse, he was unable to speak above a whisper and was

troubled with shortness of breath. He had no pain, his weight was 145 pounds, without loss.

Examination: There was nothing of note in the general examination except a chronic myocarditis. Systolic blood pressure 120, diastolic 80. Wassermann negative. Nose and throat examination negative except for the laryngeal findings. A smooth, grayish-pink, round tumor was seen emerging from the anterior half of the right false cord lying on the true cord and hanging into the glottis. The tumor could be readily replaced into the ventricle with a probe. The patient's voice then became clear, but if he coughed the tumor again came down between the cords and his voice was quite hoarse. A diagnosis of prolapse of the ventricle was made.

Operation: The tumor, held by Brünings' forceps and a wire snare slipped over it, was removed close to its base and the patient's voice was immediately restored to normal. The pathologic examination of the tissue removed showed normal mucous membrane of the larynx with slight chronic inflammation.

Prolapse of the ventricle of the larynx is generally believed to be an eversion of the mucous membrane of the ventricle due to a chronic inflammation and hypertrophy of the deeper layers. A history of much coughing is usually elicited. The condition is most frequently seen in the tuberculous or syphilitic individual; however, neither tuberculosis nor syphilis was found in our two cases. Koschier³ says these tumors are not an eversion of the mucous membrane but are solid or cystic tumors due to edema, chronic inflammation, or retention cysts, the formation of which is favored by the large number of mucous glands in the region of the ventricle. He reports two type of tumors found in his cases; one, a solid tumor consisting mostly of connective tissue, a few mucous glands showing signs of chronic inflammation and covered by squamous or cylindrical epithelium; the other type, a thin-walled cyst with many mucous glands and covered by squamous epithelium.

These tumors are usually found in the anterior third of the larynx, but frequently may extend the whole length of the ventricle. The prolapse may be bilateral, as in the cases reported by Koschier,³ Chappell⁴ and others. The condition has been noted by Kyle⁵ in young children in whom it may give rise to a marked dyspnea. Harris⁶ reports a unilateral prolapse in a young man probably due to an acute inflammatory edema from shouting at a ball game.

Differential diagnosis must be made from a fibroid or a gumma which usually will not be difficult after one has seen a case of prolapse of the ventricle.

Treatment: These tumors may be tucked back into the ventricle and solutions such as silver used in order possibly to create sufficient inflammation or scar tissue to keep the tumor back in place. This treatment is not satisfactory. Complete removal of the tumor is the only satisfactory method of dealing with the condition.

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Tonsillar Infection: A Preliminary Report Concerning the Passage of Anthrax Bacilli Through the Tonsillar Tissues as Determined by Experimental Research. GEORGE B. WOOD, *Am. Jour. of Med. Sci.*, March, 1914, page 380.

The hog is the only available animal which has a tonsillar structure sufficiently large and easy of approach for study. Unfortunately the hog is peculiarly resistant to the invasion of micro-organisms. Wood refers to work done by Ravenel and himself on tubercular infection through the tonsils. He then narrates a number of experiments performed with anthrax on hogs. He summarizes his conclusions as follows: 1. The tonsils in the hog are more readily infected by the anthrax bacillus than any other portion of the buccal or pharyngeal mucosa. 2. Anthrax bacillus penetrates through the cryptal and not the surface epithelium. 3. Anthrax bacillus probably always gains access to the parenchyma of the tonsil by passing through the living, unaltered, cryptal epithelium, and having gained access through the superficial layers of this epithelium it tends to multiply in the deeper layers and then pass into the inter-follicular tissue. 4. Anthrax bacillus penetrating through the living normal epithelium causes a devitalization of the tissues which paves the way for a secondary infection from the staphylococci or other pathogenic micro-organisms. 5. The rapidity of the invasion is influenced by both the virulence of the organism used and by the susceptibility of the individual animal.

PACKARD.