

## HEMORRHAGE OF THE LARYNX, WITH CASES.\*

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CASE I.—In February, 1898, an Englishman, aged 37 years, was referred to me for examination of the throat. Fourteen years before coming under observation, and while living in England, he had had a marked expectoration of blood that lasted two or three days and then ceased. For a few months following, he expectorated at times small quantities of blood. At this time his general health was in no respect affected, either before or following the hemorrhage. For seven years he had no recurrence of hemorrhage. About this time he came to this country. Seven years before coming under observation, he had a recurrence of the hemorrhage, and during the next four years he had hemorrhages at intervals varying from a few weeks to a few months. For three years before coming under observation he had been much worse than at any other period of equal length during fourteen years. In December, 1895, after taking a severe cold, he had had a very profuse hemorrhage lasting for a number of days. For three weeks before his visit to me, he had an almost constant slight hemorrhage, being able to raise small masses of blood at almost any time by clearing his throat. This was especially true on rising. The patient was a strong, healthy, rosy-cheeked Englishman. At no time during the fourteen years since the occurrence of the first hemorrhage, had he lost flesh or strength or suffered in any way as to his general health. His family history was perfect. He had never suffered in any way from catarrhal troubles of the upper air passages or larynx. His hemorrhages occurred without having any special reference to having a cold at time of bleeding. He gave no history of other hemorrhages. A general examination revealed nothing abnormal. Observation as to

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\*Read before the American Rhinological, Otological and Laryngological Society, at Pittsburg, Pa., May 11, 1898.

the pulse and evening temperature revealed nothing abnormal. An examination of his upper air passages revealed a slight hypertrophic rhinitis only. An examination of his larynx revealed a general engorgement of the blood vessels of the larynx, the epiglottis, and base of the tongue. No bleeding point could be detected, although he had expectorated quite a little blood within a few hours before his visit to me, nor could I detect any bleeding point within the next two months, although he had a number of slight hemorrhages. One Monday morning, after singing at church the night before, he had quite a profuse hemorrhage, but no bleeding point could be detected, although I saw him in the middle of the forenoon. At the first visit I sprayed his throat with a weak solution of nitrate of silver. This treatment was repeated at first daily, and after three or four daily treatments, every second day for a short time. The improvement as to expectoration of blood was immediate. Also the engorgement of the blood vessels was improved after a treatment or two. The reappearance of this engorgement of the vessels was noticeable after having sung in church, and the occurrence of the sharp hemorrhage the following morning. Upon continuance of the treatment as outlined, with rest of his voice and a slight cauterization of the lower turbinated bodies, the hemorrhage promptly disappeared, and after continuing this treatment for three weeks, I gave him a two per cent. solution of nitrate of silver to use as a laryngeal spray night and morning, and told him to report if he had more trouble. For two months he has had no hemorrhage whatever. From his history I believe that his hemorrhages were from the free surface of the larynx or adjoining parts of the throat, and that at no time had the hemorrhages occurred subcutaneously.

CASE II.—In 1895, a man aged 35 years, consulted me as to the origin of hemorrhages—expectoration of blood—from which he had suffered at times for sixteen years. His first hemorrhage had occurred when he was 19 years of age, after a sharp run for a train. From this time until his visit to me he had recurrences of expectoration of blood at intervals, varying widely in length. He had never had a profuse hemorrhage. He had been sent to

Colorado because of his hemorrhages, but with no benefit to his general health—as he gave no history of depressed health at any time during the sixteen years—nor to his hemorrhages. His history gave no evidence of tuberculosis, hematophilia, or troubles similar to that from which he was suffering, in other members of the family. He also had never had other hemorrhages or hemorrhoids, nor did he have enlarged veins of the leg. His general health had always been good. A careful general examination revealed nothing abnormal. He never had any rise in temperature while he was under observation—a period of eighteen months. An examination of his upper air passages revealed nothing abnormal. An examination of his larynx revealed nothing except a bleeding point—a minute ruptured blood vessel, in the anterior third of the left vocal cord; I could watch the blood as it flowed down the cord and into the posterior part of the larynx. I kept him under observation for eighteen months, and saw him a number of times when suffering from hemorrhage. The hemorrhage always came from the vocal cords, and the bleeding point could always be detected. At no time while under my observation, or at other times, as far as his history revealed, had he suffered from a sub-mucous hemorrhage. This patient I treated with a spray of ferric alum. I never could decide if it had any special influence on the case, either in arresting the hemorrhage after it started, or in preventing a recurrence. The hemorrhage usually lasted from one to three days, and recurred at varying intervals. It did not seem to be connected in any special way with taking cold. The patient had never suffered from any throat trouble, outside of the time of hemorrhage. The patient was always anxious as to his condition, and, in spite of my assurance to the contrary, he could not be persuaded that these hemorrhages were of little importance. In the spring of 1897 he went to New Mexico. He went because of his own fears, and not upon my recommendation or that of his family physician. After being in New Mexico for six months he died from a profuse hemorrhage from his larynx. At no time during the six months' stay in New Mexico had he suffered loss of flesh or strength, night sweats, cough or

expectoration, gastro-intestinal disturbances, or any other symptom of tuberculosis.

#### REMARKS ON CASE I.

Although no bleeding point in this case could ever be discovered, there is no good reason to believe that this case was other than a laryngeal hemorrhage. The profuse hemorrhage from which he suffered in England and the very profuse hemorrhage from which he suffered two years before coming under observation, was undoubtedly due to a ruptured blood vessel. The chances are that the slighter hemorrhages from which he had repeatedly suffered, were due to a diapedesis from the blood vessels. The general engorgement of the blood vessels of the mucous membrane of the larynx and adjoining parts of the throat, the prompt improvement of this engorgement under astringents, as well as the prompt disappearance of the hemorrhages from local treatment only, the reappearance of the hemorrhages after using the voice in singing, all argue strongly in favor of the diagnosis. The absence of disease of the lungs also leaves little room for doubt as to the source of the hemorrhage.

#### REMARKS ON CASE II.

The detection of the bleeding point on repeated occasions, leaves no doubt as to the diagnosis in this case. The history of the patient before coming under observation, the history after passing from observation, the evidence acquired during the eighteen months while under observation, all substantiate the diagnosis of uncomplicated hemorrhage from the larynx. The manner of death was unusual. Authorities state that there is no case on record of death from laryngeal hemorrhage. I see no other explanation possible in this case, yet I confess that it seems impossible that any one of the laryngeal vessels when ruptured should furnish blood sufficient to cause death. An expectoration of blood in any quantity has its source ordinarily from some part of the pulmonary tissues. It is easy enough to tell a patient that the blood comes from the throat, if upon examination of the chest no marked lesion is found. However, I am very certain that the source of the hemorrhage is pulmonary, even in the ab-

sence of marked lesion. I remember distinctly a case of pulmonary hemorrhage in a boy aged 18 years, who presented himself to me within a few hours after the occurrence of a sharp expectoration of blood. His history for the last few weeks was negative. He had lost no flesh or strength to his knowledge, nor had he suffered from gastro-intestinal disturbances. His evening temperature was  $98.5^{\circ}$ , and his pulse 90. A careful auscultatory examination of his chest, revealed only transference of heart sounds at the left apex and a patch of subcrepitant rales. I kept the patient under observation for a number of months. During the next six weeks the physical signs at the left apex became more marked in spite of treatment and in spite of great improvement in his general condition, although upon coming under observation he was not conscious of feeling less vigorous than usual. The physical signs in this case were never marked. If, after the first examination of the chest and no marked lesion being discovered, the case had been considered a hemorrhage from the throat and the patient had been given general tonic treatment, or possibly no treatment at all, the case might have been considered as a hemorrhage from some portion of the upper air passages, and not as having had its source in the lungs. I surely have seen many such cases in the last twelve years. Whether the condition of the lungs responsible for such hemorrhage, is necessarily tubercular need not enter into this discussion. I believe that if a patient having expectorated blood in any quantity is watched, and his chest carefully examined at intervals for a few weeks or months after the hemorrhage, time will prove the hemorrhage to have been pulmonary in origin in the great majority of cases, although at the occurrence of the bleeding nothing special in the chest may have been detected. A laryngoscopic examination in such a case is, of course, of great importance, although in the absence of a bleeding point or a general engorgement of the blood vessels of the lower throat, a physical examination of the chest is of no less importance.

Cases of laryngeal hemorrhage are rare. Authorities agree as to this point. That such cases do occur is surely certain. The hemorrhage may be from the free surface of

the larynx from the rupture of a vessel as in one of the cases reported, or it may occur as an extravasation into the submucous tissues. The hemorrhage can also arise as a diapedesis from the blood vessels. The term hemorrhagic laryngitis, under which this form of disease has been designated, until more recent observation, is not a fortunate one. This term presupposes that the hemorrhage occurs as a part of an inflammation of the larynx. This is not the case, necessarily, as the hemorrhages often occur while the patient has no inflammatory condition of the larynx. The disease may occur in patients of perfect health, and, as far as my observation goes, this has been the case. It is easy to understand how a hemorrhage of the larynx might arise in patients suffering from any organic disease of the heart or blood vessels, the lungs or abdominal viscera. I confess, however, that I have never seen a case under such conditions. To decide the determining cause in cases like those reported, is not easy. It seems to me that the explanation is only to be found in some abnormal condition of the blood vessels. Whether this pathological condition of the laryngeal vessels may be produced by any disease of the air passages above the larynx is a question that I think can be answered in the negative. There was no such explanation in the cases reported. The hypertrophic rhinitis was slight, and I attached little importance to its presence. If marked abnormal conditions of the air passages above the larynx had ordinarily anything to do in the etiology of such cases, their occurrence would not be so rare. The patient probably possesses weakened laryngeal vessels with a tendency to rupture, and consequent hemorrhage. This view seems as reasonable as that certain patients should have a tendency to repeated nasal, uterine, vesical or hemorrhoidal hemorrhages.