

edly due to a purulent inflammation of the tympanum at the time of his pain and otorrhœa. In the same spot as in the preceding cases was a tumor the size of a hazel-nut, presenting the same characteristics already described in the other cases.

As the ear in its present condition offered no signs of irritation, and as no change in the tumor had followed the healing of the ear months before, I could only advise the removal of the growth. His intelligent and positive account of the development of the growth at the time of the ear-disease, with my experience in the other two cases, led me to think that in this case we had to deal with a permanent hyperplasia which could only be gotten rid of by removal.

My presumption is that in all of these cases I had to deal with an enlarged lymph-gland in direct connection with the tympanum, although, as far as I know, anatomy has not, as yet, demonstrated this connection. The relief of the tympanic inflammation apparently removed the source of the glandular irritation and allowed the swollen gland to resume its normal condition. The cases are too few to prove this conclusively; but I have thought it worth while to direct attention to them in the hope that further observations may be directed to the possible connection between some, at least, of these small parotid tumors and tympanic suppurations.

Occasionally, during the last few years, I have found, with suppurations of the tympanum, a decidedly tender spot in the exact situation in which these tumors lie, but without any swelling being appreciable. This, I think, is probably due to a slight irritation of the same gland, not enough, however, to produce a perceptible enlargement. The glands which are usually enlarged with tympanic suppuration are those below the auricle, along the anterior edge of the sterno-cleido-mastoid muscle.

### A CASE OF TUBERCULOSIS OF THE PERICARDIUM AND BRONCHIAL LYMPH GLANDS.

BY CHARLES C. TOWER, M.D., SOUTH WEYMOUTH.

MR. C. S. F. was a native of Canada, and for forty-eight years a resident of Weymouth, Mass. He was sixty-seven years of age, married, of Anglo-Saxon race, light complexion, florid countenance, and nervous temperament. He was six feet in stature, erect in figure, and his average weight was one hundred and eighty-five pounds. He followed the occupation of bootmaker up to fourteen years ago, when, his health being poor, he left the shop and the boot business, and became a man of all work, chiefly farmer.

On his mother's side his family history was consumptive, his mother and four maternal aunts having died of phthisis. Two sisters also died of this disease. All of these relatives died in the twenties or thirties. Of two brothers whose death preceded his, neither died of consumption, the age of one being forty, and that of the other unknown. One brother and one sister still survive him, the former in his seventy-third year, and the latter in her sixtieth, and both in good health. On the father's side there is no consumption.

Mr. F.'s general state of health was considered to be fairly good. He usually ate and slept well, and he was strong and free from indications of constitutional disease, except that when a young man of twenty he had, on his own statement, a bad cough attended with loss of appetite and strength, and was regarded by his friends to be in consumption. During my acquaintance with him, extending over a period of twenty-nine years, I recall attendance upon him for several ailments, which go to show that his health was not what may be termed vigorous. Some eighteen years ago he complained of a feeling of weakness and discomfort in the left hypochondrium, which lasted for a period of two or three years, and which on examination of the case appeared to be a muscular strain, the result of heavy lifting. He was also subject to gastric disorders, and suffered considerably from palpitation. The heart was repeatedly examined, but no organic disease detected, although there was observed an occasional intermittency of the pulse, which manifested itself throughout the remainder of his life. He was also troubled for a considerable period with fissure of the rectum, which finally healed of itself.

In 1876 he was confined to bed a couple of weeks with an attack of epididymitis following the mumps. Atrophy of the testicle supervened. At a later period he had rheumatic inflammation of the shoulder-joint, which lasted over a year. Early in November, 1887, after sitting during religious services in a warm church and then going into a cool vestry, he was seized with a fainting fit, and was not restored to consciousness for nearly an hour.

The last illness was developed after special exposure on Christmas night, a year ago. The attack commenced with hoarseness, succeeded later by cough, and the symptoms of acute bronchitis, for which in the latter part of January I was called in. Nothing peculiar in the nature of the cough impressed itself on my memory. The patient, at this my first visit, was about house, and even attending to his out-of-doors duties. I saw him a week later, when he was obliged to take to bed on account of an attack of acute rheumatism, which lasted throughout the month of February, and continued somewhat into March. This attack was manifested by the usual symptoms of the disease, viz., fever, swelling and pain of joints, copious perspiration, and the uric acid diathesis, and it was treated in the usual manner. The cough, however, showed no abatement but still continued, and demanded treatment for the comfort of the patient.

In April the condition was one of marked debility. Night sweats at this period were quite pronounced. The cough was harassing, disturbing the sleep by night and exhausting his strength by day. The pulse was weak and considerably accelerated, and the temperature elevated two to three degrees, especially towards evening. The action of the heart was at this time very feeble, and there seemed to be more prostration of the system than could be accounted for by his sickness, although the alkaline treatment employed to eliminate the uric acid from his system had undoubtedly in a measure impoverished the blood, as shown by the marked pallor of the surface of the body, and by the clammy state of the skin. But the most discouraging feature of the case was the persistency of the

cough, which was dry and paroxysmal, and the cause of which I had failed to demonstrate to my entire satisfaction, although it appeared to be due to reflex irritation. The seat of this irritation was referred by the patient to the larynx, and he began at this time to complain of a feeling of distress, referred to the sternal and cardiac region. Repeated careful stethoscopic examinations of the thorax failed to reveal serious disease of lungs or heart. There was good resonance on percussion over both lungs, and the respiratory murmur was clear and full, except as modified by a few muco-crepitant râles, which were most noticeable towards the base of right lung. The cardiac dulness was normal, and the heart-sounds not unusual in character, except feeble and distant, with possibly an occasional soufflé, which condition was attributed to the rheumatic attack. The pharynx at this stage of the disease presented nothing remarkable, possibly slight congestion.

There being no improvement in the character of the symptoms during the next three weeks, the desire was expressed by the patient to enter the Massachusetts General Hospital for examination and treatment.

Arrangements having been made for the occupancy of a private room, he entered the hospital May 17. A statement of his condition, as copied in the case-book from a letter written by myself, was that it was one of debility, as indicated by failure in appetite, night sweats, loss in weight, and slight elevation in temperature. The most troublesome symptom was cough, which was described as spasmodic, and attended with very little expectoration. The record further says, "The patient complains of a tickling sensation in throat, which is excited by a deep inspiration or by speaking loud. Cannot lie on right side because of pain in front of right chest when in that position. Has dull, heavy pain in sternal region. Says when he swallows 'the food causes pain all the way down to the stomach.' Has to pass urine frequently. Appetite poor. Bowels regular. Examination:—Large man, somewhat emaciated. Tongue moist, clean. Examination of throat and nares by Dr. Langmaid shows nothing abnormal whatever. Good resonance over both lungs. Respiration everywhere vesicular. Over lower right back and axillary region a very few medium and fine moist râles. Heart apex in normal position. Sounds clear, but rather feeble. Abdomen normal. Pulse weak and soft.

May 18. Urine normal, acid; specific gravity, 1018. No albumen. Sediment contains considerable urates.

May 19. Patient is quite comfortable when up about the wards, but on lying down cough is troublesome. Complaints of soreness in epigastrium and sternal region.

May 21. Has very little trouble from cough, but was nauseated for a time.

May 22. Appetite poor. Complaints of pain and soreness across upper part of abdomen and in sternal region.

May 23. Patient discharged at his own request.

From this date the case went on with very little change in respect of the cough and the præcordial distress, except that as the weeks went by and the warm weather came on he took more exercise in

the open air and his general condition somewhat improved. The night sweats entirely disappeared in the month of July, and his appetite and strength in a measure returned. The cough, however, did not improve, but on the other hand was more and more aggravated by the dorsal position, compelling him to lie with the shoulders considerably elevated. At this time he rode out daily and took short walks in the open air, so that his countenance became more natural in color. It was, however, always clear and fresh looking, and did not present a cachectic look.

In August the case was allowed to take its course to a large extent independent of drug treatment, until in the latter part of the month it came under the management of Dr. F. F. Forsaith, of Weymouth. He first saw and examined the patient at his office after he had taken a morning ride of three miles from his home. "He gave signs at that time," according to Dr. F.'s statement, "of great weakness, and was hardly able to support himself. He was very much emaciated, and presented the appearance of having within a recent period grown prematurely old. His appetite was reported as poor, and his digestion not good. He was a little constipated. There was present an incessant, harrowing cough.

Examination:—The area of dulness over hepatic region considerably enlarged, indicating an engorgement or hypertrophy of liver. The tongue was somewhat coated, especially at the base. There was no jaundice observed. The lungs on percussion were pretty clear. There was an area some two by three inches in extent, situated just to the right of the sternum and opposite the cartilages of second and third ribs, which was unusually resonant. There was no fullness in that location at that time, but at a later period the right anterior and middle portion of chest became unusually prominent. The lungs were pretty free from râles. They were more noticeable over region of right lung than left, and increased from apex towards base. While there was no sign of valvular disease of heart, its action was feeble and unsatisfactory. There was no increased area of cardiac dulness, and no displacement of that organ.

After a few weeks dulness was apparent at lower part of thorax on both sides, and the stethoscope showed a deficiency of the respiratory murmur, giving the idea of an accumulation of fluid. Early in September a soft swelling began to show itself over upper part of sternum, extending across that bone to the front of right chest in the location previously observed to be hyper-resonant. This tumor gradually increased in size, was painless, and to the touch appeared to contain fluid. Dr. F. is not aware that there was at any time any unusual cardiac dulness, neither was there any evidence of disease of the lung tissue. The temperature ranged from 101° to 103° and did not indicate inflammatory action. There was no evidence of the existence of rheumatism while under his observation, but some little trouble in urination was noted. The patient when first seen by him could lie down flat, but the cough was increased by so doing. As the case progressed he was obliged to have his shoulders more and more elevated in bed. (Edema of the feet and legs was noticed early in October, and continued till the close of life.

The case came into my hands a second time in the latter part of October, when Dr. Forsaith met me in consultation. The edema had considerably increased, and marked dullness existed over base of thorax behind. The pulse was very small and weak, and from 90 to 100 in frequency. The respiration was also considerably accelerated. The position taken while in bed was bolt upright, and towards the last a support was placed in front for him to lean forward and rest his head upon. Any attempt at this time to lie on his back produced increased distress and aggravated the cough. The tumor already described as occupying the upper part of sternum and right front of thorax continued in much the same condition. There was good resonance over it, and the respiratory sounds were distinctly heard through it. Consequently there was no indication of the existence of aneurism.

About the 1st of November the patient was seen by Dr. W. C. B. Fifield, who aspirated the tumor with a small trocar. The fluid withdrawn was of the nature of bloody serum, and under the microscope showed no cancer cells. The case was, however, regarded as one of malignant disease, and no further treatment was advised.

Death occurred November 22, 1888, the mind remaining clear almost to the last.

At the autopsy, performed on November 23, the external tumor was found to contain about two fluid ounces of thick pus, which lay between the integument and the periosteum of the manubrium, burrowing between the cartilages of the first and second ribs of right thorax, and extending on under side of sternum about half-way across, but nowhere laying bare the bone. The abscess wall was adherent to the apex of right lung, but did not penetrate its substance. The upper lobe of left lung was friable and easily torn in separating the pleuritic adhesions to wall of thorax. The interior mediastinum, the pericardium, heart, pleura, and all the tissues underlying the sternum were involved in one mass of disease, and were sent to Prof. Fitz for examination.

Dr. R. H. Fitz reported, in regard to autopsy, that the pericardial cavity was obliterated by firm adhesions. Numerous cheesy plates and nodules, the largest perhaps three-fourths of an inch in the largest diameter and one-fifth of an inch in thickness, were found intimately connected with the parietal and visceral layers. Those of the substernal layer were continuous with similar nodules in the anterior mediastinum, the tissues of which were generally thickened. Small gray and opaque granules were also found in the pericardium.

The lymph-glands at the tracheal bifurcation formed a solid mass nearly as large as the fist. On section these glands were enlarged and cheesy, often softened into curd-like material.

The appearances were characteristic of a chronic tuberculosis of the pericardium and bronchial lymphatic glands. The former was probably the result of the latter, and had apparently extended to the tissues of the anterior mediastinum.

—The Amoskeag corporation of Manchester, N. H., has lately authorized the vaccination of its 8000 operatives at its own expense.

## REPORT ON PROGRESS IN ORTHOPEDIC SURGERY.<sup>1</sup>

BY E. H. BRADFORD, M.D., AND E. G. BRACKETT, M.D.

### PARALYTIC DEFORMITY OF THE FOOT.

Fisher<sup>22</sup> has given a very full and able description of the paralytic deformities of the foot, and has classified them with reference to the degree of distortion in such a way as to emphasize the mode of occurrence.

*Talipes arcuatus*.—The description of this very closely applies to Schaffer's non-deforming club-foot, the abnormal condition consisting in an increase in the height of the arch. This he considers results during the period of slight paralysis, as after scarlet fever; from the slight contraction of the plantar fascia; that later, as growth proceeds, there is a want of proper accommodation of the contracted parts, and an arching is thus brought about.

An aggravated condition of arcuatus constitutes a *talipes plantaris*, and this forms a link to equinus. The etiological conditions are the same as in arcuatus, but more severe, the extensors of the toes and tibialis anticus being particularly affected. In addition to the arching, the anterior part of the foot is depressed below its normal level, and bands of contracted tissue are found to draw this portion downward and backward.

Of *talipes equinus* three forms are described. The first results from a muscular condition similar to that in *plantaris*, and consists of a bending of the part of the foot anterior to the os calcis at a sharp angle. The distortion is maintained by the shortened condition of the ligaments of the sole and the short flexor muscles. Owing to the downward and backward dislocation of the cuboid and scaphoid bones, the head of the astragalus projects on the dorsum. Another, but less common form, more nearly resembles the spastic equinus, and consists of a flexion of the whole foot at the ankle-joint. Besides these two, a combination is sometimes met with and consists of a flexion of the foot with also a depression of the anterior portion, due to the imperfect action of muscles of this part. In some cases this condition becomes extreme. In the treatment of this combined form the shape of the foot should first be restored, and, later, tenotomy of the tendo Achillis.

The *varus* varieties he describes as the result of a paralysis affecting the extensors of the toes, but in which the tibialis anticus retains its integrity in whole or in part. The first degree of this deformity closely resembles a slight equinus, but in this the depression of the fore-foot is accompanied by slight inversion. With still greater deformity there is more marked contraction of the sole, and the front of the foot is rotated as well as inverted; only the outer metatarsals touch the ground, and the inner border of the foot is so raised that the great and second toes touch only on their tips. The heel is somewhat raised, and this deformity, in this respect as well as in the contraction of the sole, resembles some forms of equinus.

The next stage of this paralytic deformity resembles the usual form of equinus varus. There is rota-

<sup>1</sup> Concluded from page 37.

<sup>22</sup> *Lancet*, 1889, I. 112, 165, and 214.