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(With the Compliments of the Author.

—REPORT—

OF CASE OF HODGKIN'S DISEASE.

BY

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Read before the Medical Society of the District of Columbia.

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WEIGHT OF TUMOR, 1 POUND 2 OUNCES.

Clarence Albert Ballenger, aged 7 years and 3 months, red hair, fair complexion, a vigorous, healthy-looking boy. His family history is good. Never knew a day's sickness until August 26, 1880, when he fell while swinging on a rail fence, fracturing his left clavicle about junction of middle and inner third. He was not seen for three days, when a physician was called, who, recognizing the fracture, adjusted the bones, which united readily. About three weeks after, the mother discovered a small lump near the lower jaw on the left side, which was red and tender. About a week after, the redness and tenderness disappeared, but the lump gradually increased until, at the expiration of six months, it was the size of a hickory nut; it was movable and not inflamed. About fifteen months after fracture, his parents first noticed the appearance of several small lumps around the original one, which was rather in front of sterno-mastoid muscle. During the next six months these glands appeared to increase in size rapidly, disfiguring the boy, and causing him to be greatly disturbed during his sleep, talking and screaming, and sometimes walking about the room half conscious apparently. He would frequently come in from play during the day and complain of feeling sleepy; he would throw himself on the bed, sofa, floor, or anywhere, and almost immediately go to sleep, sleeping three or four hours and waking fretful and crying. During the last month the boy would frequently come in from play, sit down in the house, and suddenly grow very pale, have nausea, and large drops of perspiration would roll off his head. He never complained of pain about his neck, nor would he admit any tenderness. Three weeks before the operation he commenced to have croupy attacks in his sleep, and on three occasions his mother feared he would choke to death. I first saw the boy August 10, 1883, and

found an immense mass of enlarged glands, varying in size from hen's egg to size of a pea, very movable and apparently easily separated from each other, soft to touch, extending in front and behind sterno-mastoid, resting on clavicle and reaching round under chin, and pressing upon trachea to such an extent that, upon using laryngosopic mirror, could see a velvety appearance of mucous membrane on left side, caused by pressure, no doubt, and which in part accounted for the fits of coughing he had. One of the glands under chin appeared so soft and fluctuating I thought it contained pus, and passed a sharp-pointed bistoury into its centre without, however, any result other than slight hemorrhage. The symptoms being urgent, I advised the immediate removal of the mass, and on August 13, 1883, operated in the presence of, and ably assisted by, Drs. Lincoln, McKim, and Ober. The incision, about six inches, extended obliquely across the sterno-mastoid muscle, and after the extirpation of the superficial chain of glands was obliged to sever that muscle in order to get at the mass of tumors which seemed innumerable beneath, and extending behind and below the clavicle, around to back of the neck, up to angle of lower jaw, and along that bone to chin under the tongue. Feeling obliged to proceed cautiously so near the carotid, considerable time was consumed, and the hemorrhage troublesome, but not large, necessitated the placing of ligature upon the facial and occipital arteries. Meanwhile, the boy ceased breathing, and through the timely interference of Dr. Ober, who resorted at once to artificial respiration, and by the injection of brandy hypodermically, and other treatment of three-quarters of an hour's duration, the boy breathed again, much to my relief. The operation was a most tedious and complicated one, owing to the deep location of many of the tumors, they being held in such tight embrace by the deep cervical fascia, and requiring so much care to avoid injuring the important structures met with in the superior carotid triangle, that two and a half hours elapsed before the patient was put to bed.

Saw patient three hours after operation, and found him suffering from some shock, with feeble pulse and imperfect sighing respiration; warmth and circulation were restored by proper measures.

Saw patient ten hours after operation. Temperature 99.2°; pulse 110; patient restless and complaining of much pain. McMunn's Elixir ordered and wet cloths to wound, which was dry and hot.

Twenty-four hours after operation. Temperature 102°, pulse 130; ordered carbolized dressings, and quinine in five grain doses every four hours.

August 15, 1883, 8 a. m. Temperature 102.8°, pulse 120. Ordered quinine, five grains every two hours till ʒ ss is taken.

August 16, 8 a. m. Temperature 100°, pulse 112. Wound looks well. Normal amount of discharge. Patient taking beef tea and milk in sufficient quantities.

August 17, 5 p. m. Temperature 99.8°, pulse 110. Patient restless. Wound looks swollen. Removed tent, which closed counter opening (which was made at time of operation for drainage,) and a great quantity of healthy pus flowed and patient seemed much relieved.

August 18, 12 m. Temperature 99.6°, pulse 108. Patient allows some motion to be made of the head by turning back and forth on the pillow without much pain.

August 19. Temperature 99.6°, pulse 100. Removed the ligatures. Wound looks healthy. Union nearly complete. Small discharge through counter-opening. From this time he rapidly progressed towards convalescence, with comparatively slight drawback, except an abscess on the fleshy part of the left fore-arm, caused by the hypodermic injection of brandy, which, sloughing out, exposed a foul, deep ulcer, interfering to some extent with the movement of the left arm.

Lymphadenoma, with coincident enlargement of the spleen, seems to have been recognized as far back as 1669 by Malpighi, and also in 1752 by Morgagni, although the nature of the glandular change was first carefully described by Craigie in 1828, and the general clinical history of the affection was pointed out by Hodgkin in 1832, also by Willis in 1856. Important subsequent observations were made by Virchow in 1864; Wilkes, 1865; Trousseau, 1865; Wunderlich, 1866, and Murchison in 1870.

W. R. Gowers, in an article recently published, writing of the nature of the enlargement of the lymphatic glands in Hodgkin's disease, says they seem to consist at first of mere hyperplasia, and subsequently of fibroid induration. A few glands only may suffer, or every gland in the body may be enlarged. The former cases have the character of a local growth; the latter is distinctly a general disease, for which the term lymphadenosis seems the most exact. In writing of the ætiology of the disease he says: In two-thirds of the cases of lymphadenoma no cause can be traced, and the as-

certainable antecedents of the disease in most of the remaining cases evidently constitute only a small part of the influences to which it is due. Hereditary transmission has not been distinctly proved. It is three times as frequent in males as in females. It occurs, but not especially frequently, in children under ten years. Many writers say it is doubtful whether the disease has any relation to constitutional syphilis. Most frequent cause is local irritation.

Morris Longstreth, M. D., in his revision of Sir James Paget's article on Tumors in the last edition of Holmes' Surgery, says: The lymphomata have their origin from lymphoid or adenoid tissue similar to that of the lymphatic glands. These growths most commonly occur in situations in which lymphatic glands are present normally; lymphomatous growths occurring in other places were formerly regarded as of heterologous origin, until investigation showed that lymphatic or adenoid tissue is far more widely distributed in the parenchyma of the various organs than was previously known. Such growths, in fact nearly every lymphomatous growth, must now be looked upon as of homologous origin. Two varieties of lymphomata may be described:

1st. Those consisting of hyperlastic or hypertrophied glands.

2d. Independent growths which, arising from glands or other lymphatic tissues, proceed more or less continuously to a great development, which frequently have, as a cause of accompaniment, a dyscrasic condition of the blood; and which, either from themselves or from the dyscrasia, terminate fatally. All grades of these growths are found within the limits of these two varieties in respect to their cause, course, size, and malignancy.

Tubercle, scrofula, and syphilis are especially frequent causes of such glandular enlargements. There is a form which, attacking a collective group of glands, for example, the cervical, develops into a lobulated tumor of firm consistency of slow growth, so slow as to appear nearly stationary. Each lobule of the mass corresponds to one of the original normal glands, which become intimately matted together, and also with the nerves and vessels of the part, so that the complete removal of the growth is a matter of difficulty, if not impossible. This form of tumor, if not interfered with, exhibits at least for a long period a very low degree of malignancy. It is often a difficult matter to distinguish it from scrofulous disease, and it is sometimes im-

possible. Unless subsequent to an operation the growth returns with rapidity, accompanied by malignant phenomena.

Green, in his Introduction to Pathology and Morbid Anatomy, page 124, says of the development of lymphomata, that they originate for the most part from lymphatic tissue, being simply overgrowths of pre-existing lymphatic structures, mainly of the lymphatic glands. They are, therefore, usually homologous; they may, however, be heterologous, either owing to the new tissue extending considerably beyond the confines of the old, or to its growth in situations where it is normally almost entirely wanting. This latter condition obtains in Hodgkin's disease, and in certain forms of lymphoma, which are malignant. In considering the development of these growths, it must be borne in mind that enlargements of lymphatic structures are most frequently of an inflammatory nature, being due to some injury; and histologically, as already indicated, there is but little difference between these inflammatory growths and lymphomatous tumors. The inflammatory growths, however, tend to subside, the tumors continuously to increase. Further, the development of the tumors may, like that of the inflammatory growths, be determined by some injury, the injury producing, perhaps, some inflammation and enlargement of the gland, but this instead of subsiding continues more or less rapidly to increase. He says further, of the secondary changes, the lymphomata do not undergo marked retrograde changes. There is no fatty degeneration, caseation, or softening, such as occurs in scrofulous glands. Of the clinical characters of lymphomata, Green says they sometimes exhibit malignant properties. This is especially the case in those richly cellular, soft, rapidly growing forms which are sometimes met with. Such growths may rapidly infiltrate the surrounding structures, involve the neighboring lymphatic glands, and even infect distant parts. They correspond with Virchow's lympho-sarcoma.

Green says, of the Hodgkin's disease, there is a diminution in the number of red corpuscles in the blood, and that the new growths are precisely similar, histologically, to lymphoma. This new growth of lymphatic tissue extends beyond the confines of lymphatic glands. In the spleen, new growth originates in the Malpighian bodies, and so gives rise to disseminated nodules. In addition to these, wedge-shaped infarctions surrounded by a zone of hyperæ-

mia are sometimes met with, similar to those which are often seen in leukæmia.

With regard to the pathology of the disease, it is undoubtedly obscure. The development of the new growth cannot in most cases be regarded as the result of infection from a primary centre, as the process is for the most part confined to the lymphatic structures, and many and widely distant groups are often simultaneously involved. The disease appears to occupy a different pathological position to that of the malignant tumors. It is possible that there is some special weakness of the lymphatic structures generally which renders them prone to undergo these active developmental changes, the process being determined by some constitutional state or by some local injury to the glands. The progressive anæmia, which accompanies but does not precede the gland affection, is due to the progressive implication of the lymphatic structures and to the consequent interference with the formation of the blood corpuscles.

Report of Microscopical Examination of the Gland in Hodgkin's Disease, from Dr. Beale, September 29, 1883.

The gland, of which preparations were made, was about three-quarters of an inch long by five-eighths of an inch in its shorter diameter; in which direction the sections were cut. It was surrounded by an investment of fibrous tissue, very slightly, if at all, altered from the normal appearance, and about one-half the area of the section showed the normal structure of a lymphatic gland, while the remaining area was occupied by detached foci of cell-aggregation, and the stroma also was altered. While traces of the gland-structure were still apparent in these spots, the shape and arrangement of the cells indicate a new growth closely allied to cancer, and one liable to recurrence.

EDWARD M. SCHAEFFER, M. D.

The following discussion is extracted from the Maryland Medical Journal:

Dr. J. S. BEALE read a paper on

A CASE OF HODGKIN'S DISEASE.

He also presented the specimen and the patient.

In the discussion which followed,

Dr. C. E. Hagner asked what was the condition of the child which demanded surgical interference? Was dyspnœa caused by pressure on the larynx and trachea or by nerve pressure, and was this the reason of the operation?

Dr. Beale replied that the tumor pressed on the trachea and the nerves, causing croupy symptoms.

Dr. Hagner said the case was interesting, and we should congratulate Dr. Beale on getting the tumor out of such a position. He was reminded of a case seen some years ago with Dr. W. P. Johnston. The trachea was flattened out, and the pressure on the nerve so great that symptoms simulating laryngismus stridulus prevailed. With the laryngoscope he discovered the tumor bulging in the trachea below the vocal chords. He gave it as his opinion that the tumor could not be removed; but this was before Billroth had removed the larynx. He thought that as she was suffering only from pressure on the recurrent laryngeal, the patient might live a long time. She was taken to Boston, operated on and died upon the table.

Dr. Schaeffer said the only case like this he had seen was one reported to this Society by Dr. Triplett. In that case he had been struck by the freedom from cachectic appearances, though the white corpuscles were found to be largely in excess upon a microscopical examination.

Dr. King thought it was interesting to observe that a fractured clavicle seemed to be the starting point. A slight enlargement of the glands followed soon after. It was contended by some that the marrow of bones has the function of blood making, the same as is usually ascribed to the spleen. In Burlington, Vermont, he had assisted at the removal from an old lady of sixty, of a tumor which dipped down below the clavicle, and at the bottom of the wound the pleura could be distinctly seen to flap at each act of respiration. The patient recovered.

Dr. Beale had not been able to find the co-incident enlargement of the spleen. The exciting cause, he thought, must have been the fracture.

Dr. Prentiss saw a case about 18 years ago where Dr. Lincoln was obliged to tear the tumor away from the large vessels of the neck. The patient is now walking about. Saw a child three years old with a tumor over the parotid. It spread downwards until it finally compressed the trachea and interfered with respiration. Tracheotomy was per-

formed, as the child was in a condition akin to the last stage of membranous croup. It lived for six weeks, though death was finally caused by extension of the disease to the brain through the orbit, he thought.

Dr. THOMPSON thought it very questionable if the cases just mentioned were examples of Hodgkin's disease. Many large tumors in the cervical region have a different pathology. The case of Dr. Beale would seem to be a true one, though the patient was young. Its tendency to return is in favor of the doctor's diagnosis. This disease is supposed to be a deposition of tubercle in the lymph cells. Had seen a number of cases die after an operation. It is now considered useless to operate except to relieve urgent symptoms, as Dr. Beale did. Only a few years ago he operated on a man for this disease, but it returned afterwards in the abdominal cavity and he died. The large glands of the mesentery and the dulctess glands are sometimes the seat of disease. Indeed, the deposit sometimes occurs where there is no gland. There are a few cases reported where a single tumor existed. These, however, are of doubtful diagnosis.

The discussion closed.