GUMMATOUS CERVICAL ADENITIS: ITS RELATION TO AND MISTAKEN DIAGNOSIS FOR TUBERCULOUS CERVICAL ADENITIS.*

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IN all the vast amount of recent literature on syphilis, much of which pertains to the action of the recent remedies, salvarsan and neo-salvarsan, and the Wassermann technic, we find very little concerning syphilis of the cervical lymph glands. Gummatous cervical adenitis has been thought to be a comparatively rare manifestation, many syphilographers and those particularly interested in syphilis having seen but few cases. Where this form of tertiary manifestation occurs in cases obviously syphilitic, with other lesions or definite history, the condition is of interest; but the type which offers the greatest interest and difficulty of recognition is that which is the subject of this paper, that is gummatous cervical adenitis without other obvious signs of syphilis, mistaken in some cases and treated for tuberculous cervical adenitis, often over long periods of time without result. Several unusual and obscure cases of this nature I have been fortunate enough to recognize and study in the past few years and this has made a further study of the question of unusual interest.

A possible relation between tuberculosis and syphilis is well known to have occupied the attention of many students of both diseases for a considerable time; and we are constantly on the alert in cases of tuberculosis to prove or disprove a previous luetic infection. That numbers of cases of gummatous cervical adenitis are treated unrecognized as such, in the clinics and in private practice as well, is my belief; moreover, I do not think the condition is nearly as uncommon as has been supposed.

Mr. Jonathan Hutchinson¹ in his classic work on syphilis calls attention to the difficulty of making a definite diagnosis histologically between the two diseases in all cases. That the two processes may affect the cervical glands at the same time seems probable. Perhaps in such cases, where this is the only specific lesion recognized clinically, the gummatous process attacks glands previously tuberculous, perhaps small and latent, and is situated in such a location on this account; a "locus minoris resistentiae." That the converse of this is true at times must be admitted though it would seem less possible. Mr. Hutchinson's unique case was that of a "recurring chancre" or chancre redux; (tertiary lesion simulating chancre). It was excised and sent for examination; the pathologist reported typical tuberculosis except that no tu-

bercle bacilli were found. The section was shown to several expert pathologists who all pronounced it typical tuberculosis. The primary lesion in this case antedated the gummatous inflammation by five years. The pathologist despite the history, adhered to his opinion of tuberculosis. Sir Jonathan said in his remarks on this most interesting case: "After all, in these cases perhaps the two agencies are at work together, and that a latent tuberculosis modifies a more recent syphilis." On this subject, which is of such direct importance to us in this paper, Dr. Macloed, quoted by Hutchinson, has this to say: "The differentiation by the microscope between the granulomata of syphilis and tuberculosis is always difficult and in some cases impossible; for example, in the syphilitic gummata where a histological architecture may be present which resembles that of a lupus nodule in every detail with the exception of the presence of the tubercle bacilli."

This brings the following case to mind, also bearing directly on our subject though in the same general way as illustrating the difficulty of differentiating the two conditions, gumma and tuberculosis. A testicle was excised and was examined histologically by three competent pathologists. One pronounced it tuberculosis; one, sarcoma, and one, syphilis. After a time the other testicle became enlarged in exactly a similar manner and was cured by iodide of potassium.

In regard to the question of syphilis and tuberculosis, Burzi² quotes Nicholas, Favre and Charlet. In 45 out of 46 cases of syphilis they obtained a positive tuberculin reaction (intradermal) though clinically no symptoms of tuberculosis were found in the patients beforehand. It will be seen that when the pathological examination is at times so equivocal and perplexing, that the clinical picture between gumma and tuberculosis may be even more so, and especially where the process is in the cervical lymph glands. A careful history taken with a view to both tuberculosis and syphilis (congenital as well as acquired), is most important in arriving at a correct diagnosis of the condition, in cases of chronic cervical adenitis of a type to lead us to suspect one of these two conditions or both. Hawes³ has recently laid stress on the importance of a careful history in the cases of beginning tuberculosis and rightly laid stress on this over the physical examination. He urges that a history be taken with a view to syphilis in all cases. The history in cases where syphilis is suspected should be taken equally as carefully in cases of cervical adenitis. It is not enough to ask the common questions about miscarriages and stillborn children, but a more searching examination concerning collaterals and grandparents, if possible, should be obtained. It will often give precious information.

In passing now to a more special consideration of the subject we find, as stated previously,

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that the literature on the subject of gummatous cervical adenitis is very scanty. A perusal of the *Index Medicus* from 1912 to 1913 and 1914 gave little information on this subject, though it is natural that some references may have escaped my attention. The most important, as well as interesting, communication on the subject is that of Wile⁴, though the latter part of our title, "The Relationship of the Condition to Tuberculosis of the Cervical Lymph Glands," is not brought out. Wile found a strikingly small number of cases in the literature and comments on the fact, as there is such an affinity for the lymph glands in the earlier stages of the disease. Why the deep lymphatics—chest, mediastinal, etc.—should be frequently invaded and the cervical glands escape so constantly, is a fact which well merits speculation.

In Fournier's analysis of 3429 cases of various tertiary forms of syphilis there is not a single instance of gummatous cervical adenitis (Wile). He estimated that the total of recorded cases was well under 100.

Virchow divided the process of gummatous cervical adenitis into three stages as follows: (1) Stage of simple irritation, during which the intercellular substance maintains a gelatinous consistency; (2) A medullary stage during which there is active cell proliferation, puriform softening of the tumor mass and softening of the intercellular substance; (3) The state of caseation in which active cell proliferation becomes less marked but in which the main cell types are connective tissue and granulation cells.

A brief résumé of Wile's cases is of interest at this time in connection with my own to be recorded later. A boy of 19 years received his initial infection only five months before the manifestation which is of interest to us. The syphilis was severe. Five weeks after infection there was some swelling of the glands in the left side of the neck; a supraclavicular gland swelled to the size of a plum; the skin was red and there was fluctuation. Aspiration gave a few drops of sero-purulent material. A few typical spirochetes were found with a dark field illumination. The glands ruptured by a pin point opening which enlarged, and typical gummatous ulcers developed. Five-tenths gram of salvarsan was administered once with marked local and general improvement; the patient had been under mercury before (salicylate grs. .3) every fifth day. In two weeks two small glands (unruptured) had diminished until they were of normal size and of the two ulcers the smallest one had entirely healed. There was gain in weight and marked improvement in health. Wile does not state whether there was any reason for supposing that there was a latent tuberculosis of the cervical glands in this case. From experience it would seem as if this was a perfectly possible reason for the process attacking the glands as it did. The age of the patient is favorable to such a supposition.

The following cases have recently come under my observation, illustrating this condition, and the effect of syphilis on what were pathologically pronounced tuberculous cervical glands:

CASE 1. M. G., a girl of eight years, was seen at the surgical clinic of the Boston Dispensary in my service as assistant surgeon, service of Dr. H. M. Chase, to whom I am indebted for the case. Patient first seen October 13, 1914, referred from the Children's Department for enlarged tuberculous (?) cervical glands. They had been enlarged three months. The patient had been treated one year before in the Surgical Department expectantly with that diagnosis. The history was given by the mother at the time as follows: Only child, no miscarriages, mother and father well. History of an old previous endocarditis. Examination showed a fairly well developed and nourished little girl. The cervical glands under the right lower maxilla were enlarged, the skin reddened and fluctuant. A large mass under the maxilla was firmly fixed, the chief site of disturbance. There were no obvious signs of inherited syphilis. There was a similar process less extensive on the left side of the neck. The tonsils were enlarged and the teeth were poor, there was a history of nasal obstruction. Cultures taken in the throat department showed various organisms, mostly staphylococci and pneumococci. The tonsils and adenoids were removed in the Throat Department and, at the same sitting, the glands were thoroughly opened, curetted and swabbed with iodine and drained. The specimen of gland debris was sent to the pathologist, Dr. F. B. Mallory, who reported that the glandular tissue showed on microscopic examination a process more suggestive of gumma than of tuberculosis. The Wassermann reaction at this time was negative. The Von Pirquet was also negative. After the pathologist's report was received, I put the child on mixed treatment which was later changed to hydrarg. cum creta and iodide. Improvement in the general condition was striking, locally there was some improvement in the glands. From a listless, tired little girl she began to be alert and interested. The glands were curetted again and much debris removed, the child was then given three injections of .2 grm. neosalvarsan (Dermatological Department). The effect was almost magical. In a few weeks the swelling in the neck had almost disappeared and the sinuses healed. In February, 1915, the child was discharged well, with a soft, supple neck, without obviously disfiguring scars. Of much interest are the following facts in connection with this case, ascertained later. The correct family history was as follows (first history by mother unreliable): The first child was stillborn. The third child died at four months. Twins, the fifth pregnancy, were premature and stillborn. The father later confessed that he had suffered from syphilis some years before, and had never been treated.

CASE 2. A. N. was seen at the Surgical Clinic of the Boston Dispensary, Dr. H. F. Day's service, in April, 1915. The history was as follows: The father died of cancer, the mother is living and well. There were four children; one died of measles. The child has had measles and pertussis. In February, 1915, operated on at the Boston City Hospital for tuberculous cervical adenitis. A radical excision of the glands on the left side of the neck was done.

Pathological report: Tuberculosis of the cervical lymph glands. Very soon after the operation the wound broke down and sinuses formed in the neck. Examination showed a well developed and nourished little girl. Skin and mucous membranes of good color. A puckered four-inch scar from old tuberculous gland on left side of neck and an abscess, probably tuberculous, on right side of neck. Lungs and heart negative. The Von Pirquet was positive. There were no obvious signs of inherited syphilis found on examination. April 26, Wassermann was positive. The neck was very slow in healing. After three weeks of specific treatment there was considerable improvement in the neck and the sinuses were nearly healed. One large soft mass above the left clavicle remained. No neosalvarsan has been administered. Child still under treatment.

CASE 3. Mrs. L. P., 45 years, was seen at the Surgical Clinic of the Boston Dispensary April 1, 1915. The family history was as follows: Mother died of "rheumatism" and "stomach trouble," the father is living and well. There were 11 children in the family, five sisters and five brothers. Two brothers and two sisters living. Six children died in infancy and childhood, some "passed away suddenly without cause." Patient has one son living and well, 14 years of age. As a child she was never strong, constant headaches, "poor blood" and easily run down. Married at 30. Only the child mentioned, and no miscarriages. One year ago in April there were enlarged cervical glands, bilateral, and in August they broke down and were incised and drained. They have been broken down and discharged pus from sinuses and ulcerated surfaces ever since. The glands in the neck were operated upon six different times, but no radical operation was done. The patient has felt very poorly of late. The diagnosis had been one of tuberculous cervical adenitis. On March 9, a positive Wassermann was obtained and four injections were then given of neosalvarsan at short intervals. Result: great improvement in neck condition, discharge lessened, sinuses healed, and though there is still a slight amount of indurated tissue in the neck, there has been great improvement. This is an example of probable true gumma of the cervical glands mistaken for tuberculosis in a possible congenital syphilitic.

CASE 4. Mrs. C. H., 28 years, was seen at the Surgical Clinic of the Boston Dispensary. October 27, 1913. There was a history of glandular swelling on the left side of the neck for 14 years. For the last two years the swelling had been painful. There was never any redness or fluctuation and there had been no sinuses or discharge. Some points in the general history are of interest. The patient had sought relief for the condition of the neck at various hospitals and dispensaries and of private physicians for years without benefit. The husband was living and well. The patient's father was dead, cause not ascertained. The mother is living and has diabetes. She has a positive Wassermann reaction. The x-rays of the mother's tibiae show a marked periostitis, and a brother of the patient, the mother says, has syphilis. Examination showed a well developed and nourished young woman. Throat and nose clear, teeth good, no obvious cause for the enlarged glands found on physical examination. There was no venereal history. On the left side of the neck there

is an irregularly prominent mass of hard discreet glands from filbert to walnut size, occupying the region immediately anterior and posterior to the sterno-mastoid, along its length, mostly in the lower and middle thirds of this space. The lower glands were the largest, just above the clavicle and slightly posterior. There was no other glandular enlargement found. Chest negative and abdomen negative. An x-ray of the chest showed numerous glands "peppered" well down to the diaphragm with some opacity about some of the glands. An x-ray of the tibiae showed a definite periostitis. The Wassermann reaction was negative. The child was examined and showed no obvious signs of inherited disease. On November 5 the patient was put on intensive specific treatment, mercurial inunctions and iodide. The effect was striking. After three weeks, the glands were softer and smaller and the neck could be moved better. The patient's general health which had not been good was greatly improved. By January the glands were nearly gone, only one of large size remaining. In April, 1914, I excised one of the small glands for diagnosis under local anesthesia. The pathologist reported typical tuberculosis of a cervical lymph node. A short time after the operation the incision broke down *without suppuration*, the wound taking on a typically gummatous character, which healed promptly with a good scar under mercurial ointment locally. In January, 1915, the patient was seen again. The glands could hardly be felt and there was no discomfort or pain. The neck was soft. General condition good. There is a small sessile growth projecting down from the left side of the soft palate. Patient refuses its excision.

Fasal,⁵ quoted by Wile, says that the topography of the gummatous adenopathies seems to be dependent on the occurrence of the earlier cutaneous and mucous membrane lesions. This would seem plausible if we accept the modern view of spirochetal permeation.

Up to 1912 only two cases of this condition were reported in the American literature. Most of the cases reported were those occurring at the same time as other tertiary lesions. Wile says that, in his opinion, in the state of our knowledge of the different granulomata's reactions to mercury and iodide, great caution must be exercised in making a positive diagnosis of syphilis on the clinical signs of improvement, without other data and examinations to judge by. We must also bear in mind the opinion of Macleod stated earlier in the paper, and that of Nicholas, Favre and Charlet concerning the extreme difficulty and at times impossibility of arriving at a correct diagnosis microscopically, between syphilis and tuberculosis.

Cases of cervical adenitis supposed to be tuberculous, yet not quite characteristic, should be regarded as possibly gummatous, and careful study with all the means at our command should be made to prove or disprove this supposition definitely. It has been proved that, after all, the clinician must fall back on consideration of the case with an exhaustive history pertaining to possible syphilis, to arrive at a correct diagnosis.

REFERENCES.

- ¹ Hutchinson: Syphilis, 1900 edition, pp. 183-185.
² Burzi: Gaz. h'Op. Milano, 1911-1912, 432, pp. 1620-1631.
³ Hawes: BOSTON MED. AND SURG. JOUR., May, 1915, Vol. clxxii, p. 781.
⁴ Wile: Arch. f. Dermat. u. Syph. Wien und Leips. 1912, Vol. cx, 123, 1193, 1200.
⁵ Fusal: Arch. f. Dermat. u. Syph. Wien und Leips. 1910, Vol. c, 111, p. 305.

LOCAL ANESTHESIA IN THE RADICAL CURE OF HERNIA.

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DURING the past few years, under the leadership of Braun of Zwickau, the use of local anesthesia has been popularized and its field broadened. In a tentative way the method has been applied in the German clinics to practically every operation listed in the text-books. As a consequence, there has been a definite reawakening of interest in the subject in this country, an interest which has lain dormant since the brilliant work of Corning, Crile, Matas and Cushing, which followed close upon the introduction of cocaine in the eighties.

As a result of experimentation and of recorded experience, the practical applications, and the limitations of the method as well, can now be rather definitely stated. Certain fields exist where general anesthesia will still be preferred, for instance, the peritoneal cavity and the brain; not that local anesthesia cannot be and has not been successfully employed in these regions, but that the advantages of the method are on the whole overbalanced by the complexity of the technic, the uncertainty of the results, and the strain on the patient.

One field in which local anesthesia may be employed with considerable satisfaction, according to my experience, is in the operative treatment of inguinal hernia. It has recently happened that within one week three patients with inguinal hernia, in whom general anesthesia was contra-indicated, came under my care, the hernia being recurrent in two instances. Briefly summarized, their histories are as follows:

CASE 1. W. H. D., 62, no occupation, entered the Boston City Hospital July 15, 1915. Has had a massive right inguinal hernia for 14 years, during which period has worn a truss constantly. Lately pain has been troublesome. Desires operation on account of pain.

Obese. Blind from infection following injury. Crackling râles at left base. Heart enlarged outward, with loud musical systolic murmur transmitted to axilla. Urine shows renal elements.

Local: Easily reducible right inguinal hernia size of hen's egg when recumbent. Large fat pad, with calloused skin over area size of palm.

Operation, under local anesthesia, July 17. Four inch skin incision. Aponeurosis divided over canal, and freed back. Margin of conjoined tendon and Poupart's ligament developed ready for suture. Sac found and dissected free without disturbing cord. Ring takes three fingers. Sac sewed off, stump transplanted under transversalis and internal oblique. Conjoined tendon sewn to Poupart's over cord with four mattress sutures of kangaroo. External oblique closed with interrupted sutures of 1 chromic. Fat layer carefully approximated with same. Subcuticular silkworm-gut. Cunningham swathe.

Temperature was normal during entire stay in hospital. Patient suffered no discomfort and convalescence was uneventful. On August 2 head-rest was allowed, and patient was discharged August 6, with wound solid and no bulging on cough.

CASE 2. Walter C., grocer, 47, entered the Boston City Hospital July 19, 1915. Was operated in this hospital for appendicitis with peritonitis 10 years ago. Developed hernia in scar, which was repaired two years later. Had second attack of appendicitis, reoperated three years later. "Chronic bronchitis" for years. Has had hernia in scar for seven or eight months, made worse by nagging cough. In this period it has been incarcerated twice, but each time reduced by physician. Is planning to go south in the early fall, and desires operation on account of danger of strangulation.

Poorly nourished. Signs of quiescent phthisis at right apex. Heart sounds distant and of poor quality.

Local: Wide bulging scar, impulse on cough.

Day after entrance, while walking down ward, collapsed. Seen in consultation by Dr. Robey, who found nothing to contra-indicate operation under local anesthesia, which was undertaken.

July 22, ellipse including scar excised, and much subcutaneous scar tissue dissected away. Aponeurosis of external oblique recognized, and freed from scar mass. Poupart's ligament developed, as well as edge of conjoined tendon. Small sac tied off without disturbing cord. Four mattress sutures of kangaroo tendon placed. Closure as in preceding case.

Convalescence agreeable and uneventful except that on fourth day patient had a coughing spell with rise in pulse and temperature, "like attacks I used to have," which subsided in a few hours. Otherwise pulse and temperature normal. Head-rest August 10. Discharged August 13, with wound healed and no impulse to cough.

CASE 3. F. A. P., lawyer, 79, entered the Boston City Hospital July 21, 1915. Always well. Nine years ago operated for left inguinal hernia in this hospital. Two years ago right side operated by private surgeon for similar condition. One year ago attack of "cerebral hemorrhage," unconscious for one week. Comes in for recurrence of hernia on right. Painful. Cannot wear a truss. Earnestly desires an operation.

Senile, but well preserved and mentally acute.

General physical: Negative except for heart which is irregular in action, with presystolic murmur at base. Pulse high tension. Urine shows renal elements.