Muscroft (C. S.)

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Removal of a large Recurrent Fibroid Tumor from the face, neck, and mouth; returning after an operation performed nearly fifteen years previous, for the exsection of a very large "Osteo Sarcoma" of the right half of the Inferior Maxilla.

By C. S. MUSCROFT, M.D., Surgeon to the Cincinnati Hospital, and Surgeon to St. Mary's Hospital.

A PAPER READ BEFORE THE OHIO STATE MEDICAL SOCIETY.

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[*From Cincinnati Lancet and Observer, March*, 1875.]

To make this case perfectly clear, it will be necessary to quote a part of the report of the late Prof. Geo. C. Blackman, copied from the October number of the LANCET AND OBSERVER, for the year 1860:

"On the 2d of July, 1859, Lemuel Hinedon, a negro, aged 30, was admitted into St. John's Hospital, for the removal of the lower jaw, which was affected throughout a considerable extent with the disease known as osteo sarcoma. The magnitude of the tumor caused him to present a frightful aspect. From the history of the case as recorded by Dr. John A. Billings, then resident physician at St. John's Hospital, it appears that nine years before, one of the

molar teeth on the right side of the lower jaw became loose, and was somewhat painful. Soon after he noticed a small tumor on the bone, which, however, gave him no uneasiness. It increased slowly but steadily up to the time of his admission. In some parts the tumor was quite hard, in others it had an elastic feel, imparting even the sensation of indistinct fluctuations. Deglutition and respiration not seriously disturbed, although the power of mastication was nearly lost. On the buccal aspect of the tumor were two small ulcerated patches, through which, he stated, from time to time he had lost large quantities of blood. Just previous to his admission his strength had been reduced by an alarming attack of hemorrhage."

[The report goes on to state the patient was operated upon in the presence of many distinguished members of the profession, and that he had nearly died from the loss of blood, but with this exception did remarkably well, and had recovered his usual health at the end of two weeks.—M.]

"On the 7th day of August, thirty-six days after the first operation," says Dr. Blackman, "I proceeded to remove the remaining portion of the tumor. This consisted of the neck of jaw-bone, with its condyle, which were healthy, but the ramus, with the overlapping structures, were so degenerated and blended that it was impossible to distinguish them. The morbid mass extended deeply toward the root of the tongue. After the division of the integuments, the knife was laid aside; and with the bone gouge forceps I succeeded in breaking up the mass completely, and in extirpating, too, the articulation. The large mass involving the root of the tongue was raised by an assistant, so that I succeeded with less difficulty than I had anticipated in wrenching out the morbid structure. The hemorrhage was readily controlled by the application of the persulphate of iron, as fast as fresh portions were exposed by the gouge forceps.

"Nothing of particular moment occurred during the patient's convalescence, which was rapid. . . . In July last, a year having passed since he came under our treatment, Lemuel was carefully examined by Dr. Foster and myself, and we could discover no signs of a return of the disease."

I will again have to refer to the original interesting report of the late Prof. G. C. Blackman.

Lemuel Hinedon, *alias* Jas. Burns, who states his age to be forty-five years, colored, was admitted into the Cincinnati Hospital, Jan-

uary 29, 1874, and is the same person operated upon by the late Prof. G. C. Blackman on the 2d of July, 1859. He is a man of exceedingly low grade of intelligence; says that the present growth has been coming on a good while. Several physicians living in his neighborhood and knowing him well, say that it has been returning for at least eight or ten years. Although the patient says he is only forty-five years of age, those who have known him from a very distant period estimate his age to be near sixty. His hair and beard are quite gray, and the radial arteries of both wrists are ossified, and he has well-marked senile arcs of both eyes.

On admission the right superior maxillary region was very much enlarged and bulged out, as if by a tumor or expansion within the antrum. This prominence extended from the nose backward, and upward over the front of the malar bone and to the zygomatic arch, which was bulged out by the growth. It was so large as to almost close the right eye, which is affected with cataract and dislocation of the lens. Another part of the same tumor having a hard feel, had taken the place of the right half of the lower jaw, and was firmly attached to the buccal aspect of the cheek and the base of the tongue. This last-described outgrowth from the base of the tongue had extended its attachment behind the right superior maxilla into the maxillary sphenoid space and the maxillary pterygoid space, and was partly attached to the bones at the base of the skull, as well as pressing upon the right upper portion of the pharynx. It was the pressing forward and upward of this part of the growth which gave the right side of the cheek the appearance of being affected by cystic disease of the antrum. Another portion of the tumor, which filled the right side of the mouth, extending forward under the teeth, having the shape of an abrupt cone, the apex of which pressed upon and protruded the lips, giving them a swollen appearance, could be plainly seen when they were open. This portion of the tumor was very red and vascular, bleeding excessively upon the slightest manipulation in examination. On the right side of the cheek, just below and anterior to the parotid region, there was a sugar-loaf enlargement, the diameter of whose base was three inches, and whose height from base to apex was two inches, on which was an ulcerated opening. There was another tumor of a similar shape and character under the chin, but much larger, and inclining rather more to the right than the left side, the diameter of the base being about four inches, and the distance from base to apex not less than two and a half, on

which was another ulcerated spot like the former. He says that excessive bleeding will take place from these ulcers, sometimes one and sometimes the other, to such an extent as to produce fainting.

March 1st. The patient has been kept under close observation since his admission into the hospital. The two external tumors have an elastic feel at their apices, and much of the time discharge a sanious kind of fluid, and vary in size considerably from time to time. The one in the mouth disfigures the face very much, and interferes with mastication and articulation, but does not affect respiration or deglutition. I regard these tumors to be of a recurrent fibroid character, or such as have been so described by Sir James Paget in his most valuable work on surgical pathology, in a recent lecture devoted to recurrent tumors.

When the late Prof. Blackman first operated upon this patient, I regard that he was suffering from the effect of that form of disease at present recognized as cystic disease of the inferior maxilla, and that, although the term osteo sarcoma was used to define the disease by him, I entirely agree with Mr. Paget, who says: "Under the vague name of osteo sarcoma, many include together, and seem to identify, all growths in which bone is mingled with softer tissues. I also regard that in connection with the cystic disease of the bone at the time of the first operation, there existed the commencement of the recurrent fibroid disease. For Prof. B. has already stated that when he removed the remainder of the tumor, on the 7th day of August, "the morbid mass extended deeply toward the root of the tongue, and that the large mass involving the root of the tongue was raised by an assistant, so that I succeeded with less difficulty than I had anticipated in wrenching out the entire morbid structure." This "morbid mass" at the root of the tongue was undoubtedly a recurrent fibroid degeneration, which had continued to grow (although slowly at first) up to the time it was removed by myself, and as will readily be seen from the condition of the patient at the time of the operation, the growth was invading all parts of the right side of the face, even beyond the chin, as well as more than filling the right side of the mouth and extending behind the superior maxilla, and even, as before stated, encroaching upon the base of the skull.

This patient was in the hospital about five weeks before he was operated upon. My reasons for having him under observation so long were these: First, he was brought from one of the suburbs near the river, where he had the benefit of good country air, and I

deemed it necessary to acclimate him to the hospital and prepare him for the operation. Second, it gave me an opportunity of studying the case carefully, and showing it to all my surgical friends and others, as well as to learn their views as to the propriety of operating, none of whom indorsed such proceeding, at least if they did I am not aware they so expressed themselves. One, only, said if he was going to operate on the case, he would first tie the common carotid artery of the diseased side.

On introducing the patient, the remarks made, as to the propriety of ligating the common carotid artery as a precautionary measure, were considered. This seems to have been a favorite plan of the late distinguished American surgeon, Valentine Mott. But I believe the weight of recent authority is on the other side, it having been shown there has followed nearly as great mortality after ligating the vessel as a precautionary proceeding, as has resulted from many of the most extensive surgical operations for removing formidable tumors connected with the neck, face, and mouth. For a concise statement upon this point, the statistics collected by Dr. Norris, and published in the *American Journal of Medical Sciences*, for July, 1847, show the serious character of the operation of ligating the primitive carotid artery; for of one hundred and forty-nine cases, thirty-two were fatal from hemorrhage, cerebral or pulmonary disease. "Here, then," says Blackman, in his reported case, "we have one death in four and seven-tenths cases, from an operation recommended to us by the very highest authority, as a *precautionary* step in the removal of tumors of the lower jaw. The mortality is about equal to that from the latter operation itself—one in four—of one hundred and sixty cases collected by Velpeau."

For further statistics upon the subject of ligating the large arteries, see Blackman's edition of Velpeau's Operative Surgery, 2d vol.

I would not like to be understood to say, there are no cases of surgical diseases connected with the parts above alluded to, in which the ligation of the primitive carotid would be improper, yet they are not common. *In this case I decided not to use the ligature.*

The operation was done on the 5th day of March, in presence of the hospital staff, most of the leading surgeons of the city, and others from a distance, as well as a large number of medical students, who were attending the different colleges.

The patient being brought under the anæsthetic influence of chloroform by Dr. Wm. Carson, a member of the staff, who kindly consented to administer it, the operation was commenced by making an incision immediately below the zygomatic process of the temporal bone, in front of the ear, and carried downward and forward to the right commissure of the lips. The flaps were then freely dissected up, and the outside of the tumor exposed, the morbid growth having thoroughly infiltrated itself into the surrounding substances of the cheek. The tumor within the mouth and behind the superior maxilla was more than large enough to fill the outspread hand, by which I tried to wrench it out; but not being able to accomplish this, and fearing I could not control the hemorrhage should I dissect, it was then attacked with the bone gouge forceps and rapidly torn from its attachments behind the jaw. This was the work of less than a minute, so rapidly had I to use the instrument, and yet the patient lost more blood than I have ever seen flow in the same length of time. A friend who was present said that the torrent was sufficient to run a mill-wheel. For its arrest I had prepared about a dozen pieces of fine sponge, each a little larger than a hen's egg, well saturated with a solution of Monsell's persulphate of iron. These were rapidly forced into the cavity made by the instrument, so as thoroughly to compress the bleeding vessels and to close up their mouths by the coagulating influence of the styptic. Another and very beneficial effect of the application of large quantities of the solutions of the persulphate or the perchloride of iron is also to freely cauterize and char the raw surface made by the tearing away of the morbid growth, and in this manner closing for a considerable distance the otherwise open vessels, and it is from this effect we get so much benefit. No vessels were tied in the operation, nor was there ever the slightest bleeding afterward. The wound was left open until the afternoon. Upon attempting to close it, I had the greatest possible difficulty in doing so, as the edges made by the first incision were so infiltrated with bony matter that it required much force and caution to pass the needles through them. I first tried to bring the parts together with strong, steel *acupressure* pins, but in no instance could I get them to penetrate, every one breaking before they would pass through.

After removing the tumor from the inside of the mouth, it was found to contain a considerable quantity of thick, dark glary fluid, which was incysted. Part of it also consisted of bone. The loss

of blood was so great that any further attempt to remove the other tumors occupying the side of the face and chin was abandoned for the time being; but this was all I expected to accomplish at this proceeding, and I was very glad to see the patient, who had fainted, recover from the effects of the shock produced.

As to the propriety of removing large tumors of this nature at different times, we have the best authority, as well as the dictation of sound judgment, and I agree perfectly with the doctrine laid down by Blackman, Deiffenbach, and others, as the former, in the report of his case, says: "The difficulties encountered in some of these tumors must deter any prudent surgeon from the attempt to complete the task at a single operation."

The patient continued to do well after the operation; the incision in the face was healed except near the angle of the mouth, but as the healing process went on, the bony tissue in the parts became absorbed, and they resumed their natural soft consistence. He suffered but little inconvenience from the effects of the operation, so that on the 15th day of April, the second was performed.

The second operation of myself, and the fifth to which the patient had been subjected, was, like the last, done in presence of the hospital staff and many members of the profession. Chloroform again having been administered, an incision was made on the right side of the face, commencing at the posterior part of the tumor near the corresponding angle of the jaw, and extending in a curved line round the lower part of the cheek, through the base of the second tumor, beyond the median line on the left. The integument was then dissected up from the tumors, and the principal parts of them removed by the knife, but there was a large process connected to the root of the tongue, which I deemed best to tear away with the bone gouge forceps. The hemorrhage in this operation was not at all profuse, it being expedient to tie but two small arteries, and one of these to the left of the median line. The bleeding from the base of the tongue was arrested by the use of the solution of the persulphate of iron applied on sponges. In removing the part of the tumor connected with the remaining left half of the inferior maxilla, the broken end of the bone remained precisely in the condition it was left after the first operation of Prof. Blackman, the detached portion having been removed at that time by the strong bone gouge forceps, or nippers, and not sawn off.

Both of the tumors removed at this operation were cystic in character, and like the last one, contained a thick, dark, glary fluid.

The base of each was fibrous in consistence, and the same form of degenerated tissue extended from a short distance in front of the ear of the right side, occupying all of the same side of the face as low down as the neck, and extending under the chin beyond the median line.

A few days after the operation, a large part of the lower flap sloughed and came away, the parts previously having been brought together by the interrupted suture. After this the patient did well, but from the loss of tissue a plastic operation had to be performed to close the very large open space that had been left. This succeeded only in part, and had to be again repeated in the course of two weeks, and when it was nearly healed, and the patient about to be discharged, he was suddenly attacked with phlegmonous erysipelas of the face, the seizure being the most severe and sudden I recollect ever to have seen. He was visited regularly every day, and I was rejoicing in the triumph achieved, to have gotten my patient through four such terrible ordeals, when to my astonishment, after leaving him at my last visit cheerful and happy, I found him with swelling of the upper part of the right side of the face and a pulse beating at the rate of one hundred and forty to the minute, and an accompanying heat of surface of one hundred and six and a half degrees of Fahrenheit's thermometer, the other symptoms being quite as unfavorable. The disease, however, subsided, and he was able to leave the hospital on the 20th day of May, still with the upper part of the right side of the face swollen. There was accompanying this attack of erysipelas, from its first onset, a considerable enlargement of the cervical gland behind and under the right ear, which never subsided, although the lower part of the face had nearly returned to its natural condition, except the great loss of tissue. Since the patient left the hospital I have seen him several times, at each of which the swelling of the face was increasing, as also the glands of the neck before mentioned, and the corresponding gland of the opposite side, as well as others, have become affected; his general health does not decline, but the primitive disease is undoubtedly spreading and returning with greater violence than it has yet done. At the time the patient left the hospital, the wounds from the different operations had entirely healed, except a small space at the root of the tongue, which remained open to the extent of less than an inch in diameter, and this was healing kindly. There is thus far no tendency for the

disease to return at the root of the tongue, the point at which I believe it to have first commenced.

I learned from the very intelligent family with whom the patient lives, that Prof. Blackman performed an operation on this patient about eight years ago, and he then said it would be impossible for him to submit to another. So that there is strong testimony in favor of these tumors having made considerable progress. At that time, as to any history that could be gathered from the patient himself, it would be entirely unreliable.

I hope I may not be considered prosy in taking up so much of the time in reporting this case, but to me it is of so great interest in all its features, especially the pathology, that I have appended a few paragraphs from that great master, James Paget, who, I regard, has so excellently described and properly named this disease.

Speaking of these tumors, he says: "Almost every form of tumor may occasionally present examples of recurrence, so that the distinguishing term I have employed must be understood to express, not the possession of any specific form of structure, but rather a peculiar tendency manifested in the life of the tumor. For it may be accepted as a well-established fact, both in physiology and pathology, that similarity of structure between two or more different parts is not of itself sufficient to determine functional correspondence. The examination, therefore, of any texture, either morbid or healthy, can not be regarded as complete if it is limited to a mere determination of its form, appearance, and structure. Its growth, development, tendencies, influences upon the individual upon whom it occurs—in short, its life—must be attended to. Its theological as well as its morphological aspects are to be considered."

He says also: "The form of tumor in which this property of recurrence is most strongly exemplified, is one which in its structure most nearly resembles the common fibrous tumors, and for it I have proposed the name of 'Recurrent Fibroid Tumor.'"

I hope I will be pardoned for quoting one or two more paragraphs from this very distinguished author, as the description given by him of the recurrent fibroid tumor, is to my mind the description of the character of tumor with which I have had to encounter.

Mr. Paget says further: "Although the various instances of recurrent tumors recorded, present many diversities of structure, yet they may be said generally to have possessed the character of in-

complete development, and to have approximated to the embryonic or rudimental, rather than the perfect state of natural tissues. And this rule of persistent or arrested embryonic structure in the recurrent tumors is so general, that in practice it is advisable to speak with hesitation of the ultimate result in any case in which a tumor is found to be composed of rudimental tissues. This similarity in structure to embryonic texture becomes more strongly marked after each removal and recurrence. So that a tumor, which at first might be not unlike the normal fibrous or glandular texture in which it grew, after repeated removal and recurrence becomes softer, more succulent, and in its latter growths may seem to the naked eye little more than like masses of yellow or ruddy, soft gelatine, with blood-vessels. The latter are usually much more rapid in their progress than the earlier growths. They are generally less well defined, penetrating farther and more vaguely among interstices of adjacent parts, and more quickly protruding through the skin or scars over them.

And in these characters the later formed tumors assume more of the character of malignancy than the earlier. The author, quoting Mr. Syme, "who also expresses a similar transition, describing, as the usual course of the cases he has seen, that after one or two recurrences of the tumor, the next new productions present a degeneration of character, excite pain, proceed to fungous ulceration, and thus in the end prove fatal." So that, although there be cases in which the evil career has not been run, yet I think we may regard these tumors as approximating to characters of malignancy, not only in their proneness to recurrence after removal, but in their aptness to assume more malignant features the more often they recur. . . .

"But the evil result does not by any means follow as a necessary consequence of repeated recurrence of the tumor, for there are many cases now recorded in which the patient retains, to all appearances, perfectly good health, and shows none of the cachexia which would almost certainly exist in a patient who had suffered repeated recurrences of cancer. . . .

"The recurrence of these tumors takes place, not merely in the same organ or tissue, but *in loco*—in the place in which they originally occurred—in the cicatrix or closely adjacent to the scar of the first operation wound. And here again do they possess a character by which they are distinguished from the malignant tumors,

which, in their recurrence, may multiply not only in the same part, but in distant organs. . . .

"Thus we have in these recurrent tumors, characters which connect them on the one hand with the innocent and on the other with the malignant tumors."

In Bilroth's Surgical Pathology, he devotes a few pages to a disease called by the name of adeno-sarcoma. The disease there described certainly has many features in common with the case under consideration, and is probably the same. The following microscopic examinations kindly furnished me of these tumors, by Drs. N. P. Dandridge and J. C. Mackenzie, the pathologists of the Cincinnati Hospital staff, I think coincide with those of Theodore Bilroth.

Dr. Dandridge says: "The tumor presents great variety of structure in different parts. From the mass occupying the superior maxilla and removed at the first operation, the section exhibits a fibrous tissue, infiltrated in parts by cellular elements. In places there is a more or less regular alveolar arrangement, the alveoli differing greatly in size, and so closely packed with cells as to make it difficult to clearly trace their outline and shape. Again, there is regular gland-like structure, as though the sections were through acinous gland, displaying round or slit-like openings as the ducts were cut at right angles or obliquely. These openings were lined by a single layer of columnar epithelium. At another part there was a papillary arrangement; the papillæ were covered with columnar epithelium, and projected into a spindle-celled and fibrous tissue. This variety of structure was not seen in any one specimen, but was only found after studying a large number of sections. The mass removed from the chin seemed principally composed of a simple, very loose-meshed connective tissue, though here and there a slight infiltration of cells was seen."

Dr. Dandridge was present and assisted me in three of the first operations.

Dr. J. C. Mackenzie makes the following brief statement:

"The tumor presents a very composite aspect. Tubes lined with columnar epithelium, are mingled with tissue containing spindle-shaped cells in abundance, and in some places there are alveolar spaces filled with large granular cells."

July 14th. I have been kindly permitted by the secretary of the Society to withhold this paper to date, so that I can state the condition of the patient, and to what extent there has been re-

newal of the primary disease. I find him in good general health, but the swelling of the glands on both sides of the neck is increasing; the one on the right side has a small sloughing ulcer upon it. There are also two small openings having the appearance of abscesses, one on the side of the forehead, and the other over the zygoma, each of which secretes a purulent discharge; the whole of the right side of the face and forehead are very much swollen. The small open space before mentioned which corresponds to the root of the tongue is not yet healed, but is dry and cicatrizing. There is no return of the disease at either place which was the seat of my operations. The disease is now assuming the character of malignancy, which it has never done before.

It has been a source of great satisfaction and instruction to me to have been able to follow up this case for so long a time—over fifteen years. I was present and assisted in the removal of the first tumor, July 2, 1859.