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DISARTICULATION OF THE RIGHT HALF OF THE LOWER JAW FOR ENCHONDROMA.

By W. D. HAMILTON, M.D.,
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The patient, a Mrs. E. T., came from Steubenville, Ohio, through the courtesy of Dr. Floyd, Dr. Nelson, and Dr. Frissell. She is twenty-one years old, and her family is free from the taint of malignant disease. In November, 1883, a lump of the size of a large filbert appeared on the outer surface of the body of the jaw, midway between the angle and symphysis. A year later a dusky enlargement, enveloping the lower right third molar, was seen in the mouth. A dentist extracted the tooth, and the bulk of the growth has been attained within the past year. Little pain was felt from first to last, and three profuse oral hæmorrhages occurred. When the writer first saw her she was somewhat exsanguinated. From a point one inch above the right zygoma to within half an inch of the symphysis the face was enlarged. The right cheek and the front and side of the face were only moderately prominent.

Fig. 1 gives an inadequate idea of the extent of the disease. As the growth enlarged it went as far as possible in the direction of least resistance. It nearly filled the mouth, destroying the right floor, and lifting the roof. It then pushed backward toward the pharynx, so that the right tonsil seemed to be a part of it. The most formidable feature of the disease was that

which crowded up toward the base of the skull, above the zygoma, and backward into the neck.

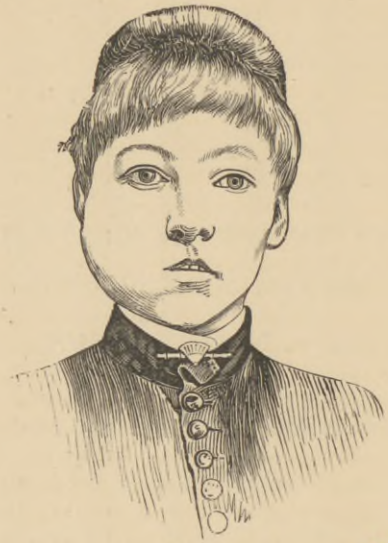

FIG. 1.

Surgeons agree that these operations increase in gravity in proportion to the extent of involvement of the angle and ramus. It is hard to understand how any greater involvement of these parts would have permitted of the successful removal of the jaw.

The mouth was pushed toward the sound side, the right angle being slightly elevated. The closure of the lips required an evident effort. Examination of the oral cavity revealed an irregular mass extending beyond the median line. Most of the teeth on the right side were buried in the diseased jaw, and mastication had become difficult on account of the resistance which the enlarged articulation offered. She was continually annoyed by the foul secretion from a large ulcer in the mouth, caused by application of nitrate of silver. The diagnosis of

enchondroma was made, and the operation for its removal performed at Mt. Carmel Hospital, May 10, 1887. The tongue was first transfixed with a ligature, and held by an assistant. The usual incision was made. The facial artery and vein were promptly divided and secured. Following the tumor closely, a careful dissection was made with blunt scissors, until, the cheek having been lifted, the mass was partially exposed. The cavity of the mouth was not entered until later. The bleeding points were ligated as soon as divided. An incisor having been extracted, the bone was easily cut in two with the saw.

Here began the difficult work of the operation, viz., the completion of the deep upper and posterior dissection, and the disarticulation. The external and internal carotid and internal maxillary arteries, Stenson's duct, and the facial nerve were all in close proximity to it. Both the condyloid and coronoid processes were enlarged, particularly the latter, which had extended behind and above the zygoma, lifting it and making it more prominent. Bleeding was very free at every stage of the deep dissection. The division of the jaw allowed it to be lowered, rotated, and everted. Four of the vessels were so deeply situated that all attempts to tie them failed, and as many hæmostatic clamps were left *in situ* at the upper end of the wound. Catgut was employed for the smaller vessels, and about six silk ligatures were used on larger ones. The wound was closed with silk inside, and continuous gut sutures held the skin flaps in neat coaptation, save at the upper angle, where the clamps were dependent. A drain was left in for a few hours, at the lowest point, and absolute cleanliness was observed. A gauze dressing was adapted. Great shock followed the operation, and for a time it seemed doubtful whether the patient would react. The forceps were removed the next day, and a few stitches were introduced. There was but little fever. The silk ligatures excited some swelling and irritation, which ceased after they had come away. For a time sinuses persisted beneath the chin and in front of the ear; but these have entirely healed. The tendency to retraction and lateral displacement was obviated by persistent daily exercise. The lower jaw was locked outside of its opponent for minutes at a time.

She now has no trouble in masticating her food. The cheek is almost natural in appearance. A slight depression

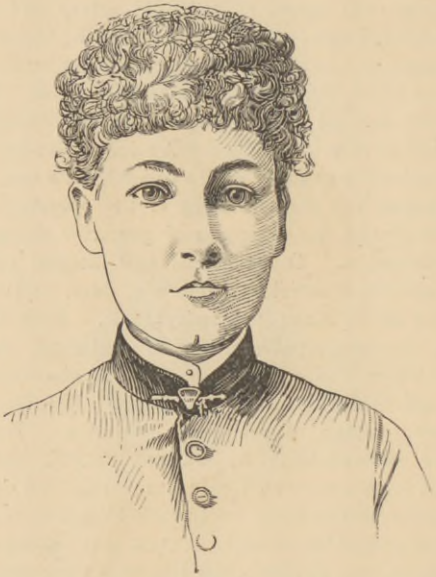

Fig. 2.

exists where the clamps were attached. The cicatrix is gradually becoming less distinct. The photograph from which Fig. 1 was drawn was taken a few days prior to the operation. The two others show the result ten weeks afterward. Fig. 2 indicates very fairly the contour of the face and the dimple-like end of the cicatrix. Fig. 3 shows the line of incision, which was so located that the carotid pulsations may now be seen beneath the vertical part of the scar. There is less distortion of the mouth than formerly. Little if any harm was done to the facial nerve or Stenson's duct.

In fact, neither the nerve nor the parotid gland could be isolated and recognized. Eighteen artery forceps were constantly employed, and in the aggregate there was very little hæmorrhage, although it is supposed that thirty vessels were tied. Many of them were of considerable size,

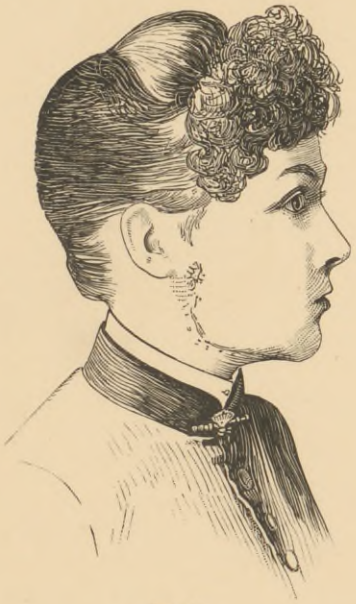

Fig. 3.

but were so distorted by the growth that it would be well-nigh impossible to assign their proper anatomical names. The dissection was accomplished almost entirely with strong blunt scissors. The tumor weighed twelve ounces, and two hours were required for its removal. She has gained several pounds in flesh, and is enjoying excellent health.