

BENIGN BONY ENLARGEMENT OF THE CONDYLOID PROCESS OF THE MANDIBLE*

BY ROBERT H. IVY, M.D.
OF PHILADELPHIA, PA.

IN THE last three years I have treated three cases of bony enlargement limited to the condyloid process of the mandible. A search of the literature several months ago succeeded in finding only one case which seemed comparable in any way to these, *viz.*, that recorded by Eckert.¹ Eckert's case has been mentioned and depicted (Fig. 1) by several other writers.^{2, 3} Further trouble in looking up the literature has been spared by Gruca and Meisels who recently⁴ have collected 14 recorded cases and added three of their own.

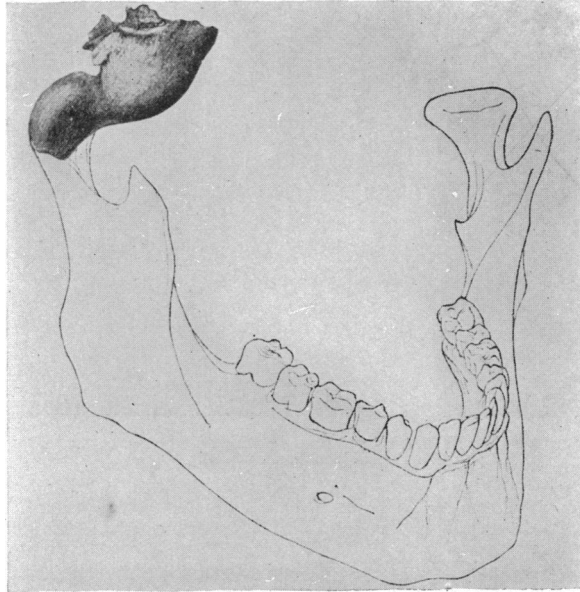


FIG. 1.—Eckert's case of hyperostosis (Scudder.)

CASE I.—C. McH., female, married, age thirty-five, was first seen on March 21, 1924. For about three years she had had slight pain and gradually increasing swelling in the region of the right mandibular joint, accompanied by a deviation of the chin to the left with malocclusion of the teeth.



FIG. 2.—Enlarged condyle in Case I.

Examination showed visible enlargement beneath the right zygoma, with some tenderness, but no definite mass could be felt on palpation. The right ascending ramus of the mandible appeared to be longer than the left, and the whole lower jaw was pushed toward the left, with consequent malocclusion of the teeth. There was no limitation of opening of the jaws, though some crackling could be detected in the joint region on the right side.

Radiographic examination showed the right condyle of the mandible to be irregularly enlarged to about three times the normal size. The left condyle was normal.

General physical examination shows a well-developed woman, with no other bony enlargements or other significant abnormalities. Wassermann reaction negative.

* Read before the Philadelphia Academy of Surgery, October 4, 1926.

April 1, 1924, under ether anæsthesia, through a Blair incision the right condyle of the mandible was excised by dividing its neck with chisel and mallet. The condyle was

found to measure 3 cm. in its transverse diameter, was thicker than normal, and presented a lobulated appearance (Fig. 2). Histological examination revealed no evidence of inflammatory disease or pathological tissue of any kind—simply an overgrowth of bone and cartilage.

After the operation the mandible returned at once to its normal relation with the upper jaw, and after slight post-operative pain and tenderness in the wound the patient was discharged as well. A letter dated September 27, 1926, states that the patient has felt much better since the operation.

CASE II.—R. L., female, single, age twenty-seven. Examined on April 28, 1925,



FIG. 3.—Case II, before operation, showing enlargement of left side of face.

For about a year she had noticed a gradually increasing downward enlargement of the left side of the lower jaw, with little or no pain, although she suffered from headaches. She sought relief because the shape of her face was changing.

On examination it could readily be seen that the left side of the face was larger than the right (Fig. 3), the chin being slightly deviated to the right. The left lower teeth did not come into contact with the upper teeth when the jaws were closed. There was no limitation of movement of the lower jaw. No masses could be felt, but the distance from the border of the zygoma to the angle of the mandible on the left side was 2.5 cm. greater than the same measurement on the right side. No other abnormalities were found on

physical examination. Radiographic and ocular examinations for pituitary disease were negative. Wassermann reaction negative. The X-ray showed a well-defined antero-posterior enlargement of the left condyle of the mandible with smooth margins, the



FIG. 4.—Case II. Radiograph showing enlargement of left condyle.

ENLARGED CONDYLE OF MANDIBLE

coronoid shadow being much lower than normal (Fig. 4). Four months later the patient returned complaining that the deformity was increasing and that she was beginning to have pain in the region of the left mandibular joint. August 28, 1925, under colonic ether anæsthesia, through a Blair incision, the neck of the left condyle was exposed and the condyle excised with chisel and mallet. There was found a uniform bony enlargement in all directions. Unfortunately the specimen was cut to pieces in the laboratory. Dr. E. A. Case gave the following report of the histological examination: "The bone is enlarged and denser than normal. There are dense trabeculæ, and marrow spaces containing a rather cellular bone-marrow. Beyond hypertrophy and an increase in density, the bone is not diseased histologically."

After operation, the facial deformity disappeared completely (Fig. 5). The normal occlusion of the teeth was restored, although the patient complains of discomfort in mastication and vague pains about the head.

Bony enlargements of condyloid process present a definite clinical syndrome, *viz.*, slowly progressive vertical elongation of one side of the face, produced by lengthening of the ascending ramus of the mandible, the chin being pushed over toward the opposite side, failure of the upper and lower teeth on the affected side to meet, and little or no interference with mo-



FIG. 5.—Case II. Patient after excision of enlarged condyle, showing return of facial contour to normal.

tion of the jaw. Gruca and Meisels discuss various views as to the etiology and pathology of this condition. Some of the reported cases suggest that middle-ear infection may stimulate an inflammatory hyperplasia and overgrowth of the epiphysis, but nothing definite is known as to the cause. The disease has been classified as osteoma, exostosis, hyperostosis, hypertrophy, inflammatory process, while Gruca and Meisels term it "overgrowth." In the two cases reported here there was no evidence of inflammation or true tumor formation.

Most of the recorded cases were successfully treated by the method employed here, *viz.*, excision of the enlarged condyle.

CASE III.—This case differs somewhat from the others. The patient was a woman, aged forty-eight, seen on May 18, 1925.

Three years previously she first noticed discomfort in the region of the left man-

dibular joint, which for several months had amounted to severe pain at times, accompanied by difficulty in opening the mouth.

Examination showed slight fulness and tenderness over the left mandibular joint, and considerable limitation in opening the jaw, on account of pain caused by movement. The patient was edentulous, making it difficult to determine whether the jaw deviated to the opposite side. At any rate, this sign, if present, was insignificant. There was no lengthening of the left ascending ramus.

X-ray examination (Fig. 6) showed an oval enlargement bulging out the anterior

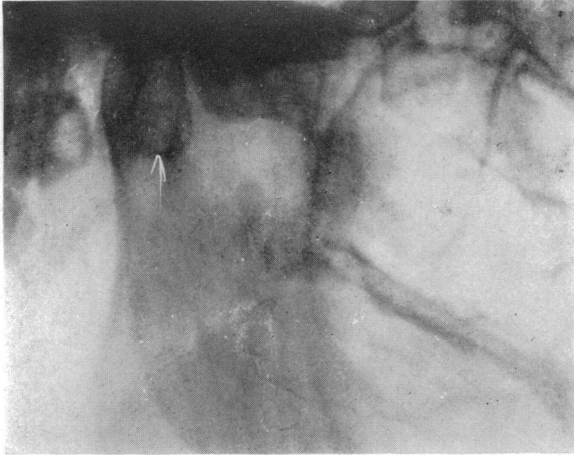


FIG. 6.—Case III. Cystic enlargement of left mandibular condyle.

aspect of the left mandibular condyle. The enlargement had a well-defined margin enclosing an area of less density than the surrounding bone.

Operation May 16, 1925, under ether anesthesia, consisted in removal of the left condyle of the mandible through a Blair incision. The condyle was removed in several pieces, and the anterior aspect consisted of a thin shell of bone enclosing what appeared to be blood and marrow—clinically a bone cyst. Microscopically, the bone itself appeared to be normal, with evidence of hemorrhage on

the surface of the cavity. No giant cells or tumor cells of any kind were found.

The operative wound healed in one week, without complications. One month after operation the patient stated that she was without pain, but that her jaw was still stiff and could not be opened wide. This is to be expected such a short time after operation. In a letter dated September 28, 1926, patient states that she now has no discomfort whatever in her jaw.

This third case differs from the others in that the overgrowth was cystic rather than solid. The literature records no cases of bone cysts limited to the condyloid process of the mandible. The principal symptoms were limitation of motion and pain, rather than visible deformity.

LITERATURE

- ¹ Eckert, B.: Osteoma des Unterkiefers. *Beitrage z. klin. Chir.*, 1899, vol. xxiii, p. 676.
- ² Scudder: Tumors of the Jaws.
- ³ Perthes, G.: *Verletzungen und Krankheiten der Kiefer*. Stuttgart, 1907, p. 127.
- ⁴ Gruca, A., and Meisels, E.: Asymmetry of the Mandible from Unilateral Hypertrophy. *ANNALS OF SURGERY*, 1926, vol. lxxxiii, No. 6 (June), p. 755.