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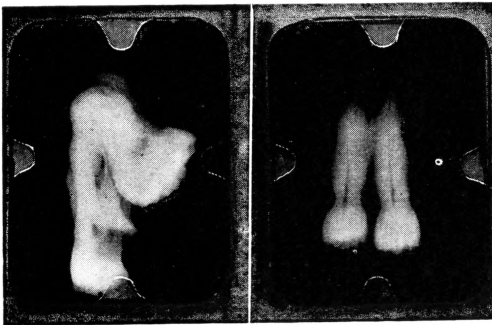
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SPECIAL ARTICLES

TWO CASES OF TOOTH FUSION AND THEIR SURGICAL MANAGEMENT *

By Errold D. Collymore, D.D.S., '23
White Plains, N. Y.

I AM quite aware that in reporting these two cases of tooth fusion I present nothing novel or unique in the field of dental abnormalities. The literature is replete with reports of tooth fusion of one type or



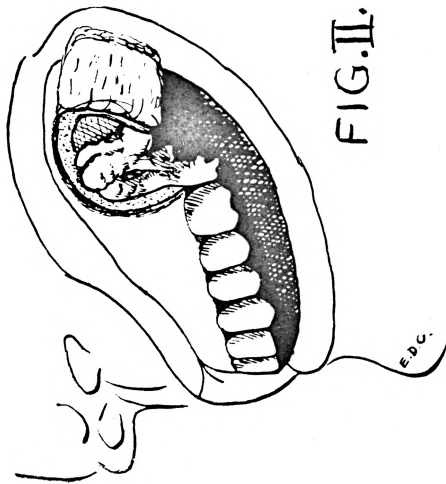
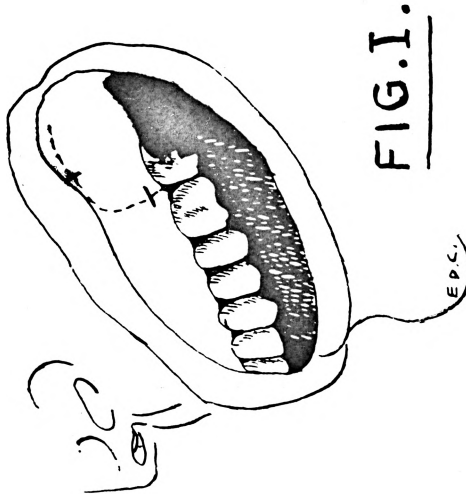
another. These cases, however, occur with such infrequency in the individual practice as to make them, at least, of interest to the practitioner into whose experience they come. There is always the element of surprise in their appearance. So seldom (as to be regarded as rare) does the fusion

occur in the enamel that there is no warning of what is in store for the operator. In these days of extreme financial stringency among one's patients, one hesitates to suggest an added cost for an obviously "simple" extraction by making an X-ray. In neither case, therefore, was an X-ray made of the cases here presented before the operation was begun. The X-rays shown were of the extracted teeth.

I will not enter upon a discussion of the macroscopic or microscopic features of tooth fusion. This is all to be found in the scientific dental literature and textbooks. I shall pass on to the cases under observation.

CASE I. I.B., female, colored, age 34 years, presented on February 2, 1932, suffering from a severe neuritis involving the left side of the head, face, neck and shoulders. The pain communicated itself to

* Editor's Comment.—It will be our policy to publish from time to time, cases of interest and merit from our graduates in practice. It is a pleasure to present here the first such article, by Dr. E. D. Collymore, expressing his views and experiences on the subject of "Tooth Fusion."



the left eye and to all of the teeth on the left side. The patient had been suffering for more than a week and was being treated by her physician for the neuralgic symptoms. Getting no relief the patient was referred to me by her physician for treatment.

Examination disclosed the lower left second molar absent, and the lower left first and third molars badly decayed. The upper left second molar was also badly decayed, and the upper left third molar was absent. So advanced was the state of caries in these teeth that their extraction was at once recommended. A mandibular injection for the lower left, and a muco-buccal injection for the upper left side were made. The lower molars were removed without unusual difficulty. I then began the removal of the upper left second molar with S.S.W. forceps No. 150. Encountering unusual resistance, it was decided to make a flap and remove an adequate portion of the buccal plate to effect delivery of the tooth. A semi-lunar incision was made as in Fig. 1 and the flap retracted with the periosteal elevator. With mallet and bone chisel enough bone was removed to expose about one-half of the length of the buccal roots. An attempt was then made to luxate the tooth; but after expending much effort found the tooth just as resistant. The removal of the buccal plate was continued until the buccal roots were exposed to what was estimated to be, the apices. Another attempt to rotate the tooth buccally brought a welcome sign of yielding. I continued the bucco-lingual movement, expecting momentarily to disengage the tooth; but could not dislodge it in spite of a considerable looseness. A downward traction was then decided upon, and instantly additional tooth structure was discovered beyond what was thought to be the apices. The tooth would not be delivered with downward traction. With the mallet and chisel, the opening in the buccal plate was extended slightly distally at its apical extent—Fig. 2. Upon applying the swab, I noticed the familiar sight of enamel moving simultaneously with every movement effected upon the second molar. The possibility of fusion of the absent third molar instantly came upon me like the rosy flash of dawn. I extended the aperture in the buccal plate slightly further distally. Then, with a firm combined buccal movement, with traction, the mass was delivered, and disclosed a complete fusion of the roots of an impacted third molar with the roots of the second molar. Fig. 3.

The margins of the bony crypt were cleared of sharp edges of bone with the rongeur, and the crypt irrigated with saline solution. A four-inch strip of one-fourth inch iodoform gauze was so arranged in the

crypt and socket as to simplify the removal of the dressing through the usual opening of the socket at the alveolar crest. The flap was drawn back in its usual position and sutured as indicated (back to Fig. 1), care being taken not to engage the needle and suture material in the gauze.

The patient was dismissed with instructions to apply the ice-bag to the operated side of the face at alternate intervals of twenty minutes over a period of four hours. Tablets of Allonal "Roche" were prescribed to be taken in the following manner: one tablet upon arriving at home, and one tablet every three hours until three doses have been taken, and thereafter, one tablet is to be taken every three hours as required for pain. A laxative of magnesium citrate was also prescribed to be taken the same night of the operation. A saline mouthwash was also prescribed for use every three hours daily. The patient was seen each day after the operation for ten days. The gauze dressing was removed at the end of the first twenty-four hours. The socket and crypt were irrigated with saline solution and dressed with a shorter gauze dressing each day. At the end of the seventh day the sutures were removed. The patient was dismissed after the tenth day with instructions to continue the daily saline mouthwash for another week, and to give notice at once in the event of any unusual symptoms. The healing was uneventful, and the neuralgic symptoms completely cleared up shortly afterward.

The following is a description of the teeth mentioned above: The disto-buccal root of the second molar was found to be continuous with the mesio-buccal root of the impacted third molar. The mesio-buccal root of the third molar was inclined sufficiently mesially to unite at the junction of the apical and middle third with the apical third of the mesio-buccal root of the second molar. The lingual root of the second molar was fused completely with the lingual root of the third molar at about the middle third of the lingual root of the third molar. The disto-buccal root of the third molar was free, but closely packed to the other two roots of the third molar. There was evidence of considerable hypercementosis about the roots of both teeth. The crown of the third molar was inclined distally and situated at about the junction of the middle and lower third of the second molar roots.

CASE II. M.W., female, colored, age 46 years, presented on June 2, 1934, with a painful upper left second bicuspid. Examination disclosed an interproximal cavity on the distal surface along the cemento-enamel junction. Extraction was recommended. A muco-buccal in-

jection was made. When the forceps were applied, and gentle bucco-lingual force exerted upon the second bicuspid, it was observed that both bicuspids moved simultaneously. This, and further tests were convincing evidence that the two teeth were united to each other. In order to obviate undue fracture of the buccal plate, it was decided to retract a flap and remove an adequate area of the buccal plate and thus facilitate the extraction. Accordingly, two incisions were made: one, midway between the first bicuspid and cuspid; the other, between the second bicuspid and the first molar. The incisions extended from a distance of about one-quarter inch below the muco-buccal fold, tapering slightly, to the free gingiva. With the periosteal elevator the muco-periosteum was retracted, thus exposing the buccal plate. With mallet and bone chisel the two teeth were denuded of their buccal plate for a distance of about one-half inch. Exerting a gentle bucco-lingual pressure while grasping the second bicuspid with the forceps, the two teeth were removed. Upon removal, inspection showed the two teeth to be united firmly along their middle third by a fusion of the cementum. Subsequent X-ray examination of these teeth showed them to be independent anatomically of each other in structure. There was a marked hypercementosis of the roots of both teeth. Multiple foramina (Fig. 4) were also disclosed in the second bicuspid on X-ray examination. A suture was placed on each side of the flap. With the usual care the case healed uneventfully. The one common feature of these two cases was the marked hypercementosis.