ON THE TIME OF ERUPTION OF THE FIRST DECIDUOUS TOOTH

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The family physician not infrequently meets with a mother who shows some concern because her infant has not cut its first tooth 'at the usual time', which is taken to be around the 6th month of life. If the infant appears normal in all other respects the parent, usually, can readily be reassured. However, when the delay in cutting the first tooth is prolonged, say to the 10th or even the 12th month of life, despite an otherwise normal growth-pattern, is reassurance that this absence of milk-teeth has no adverse significance still to be quite so readily given, or should one make further enquiry into what possible implication it might have? This paper is an endeavour to answer the question.

Outstanding men of the past who it has been said were born with a tooth include Julius Caesar, Louis XIV of France, Mazarin, and Richard III of England. The lives of these remarkable men are so different that the tooth in itself appears to to have had no special meaning in their lives, despite a long-held belief in parts

of Central Europe that a baby born with a tooth in its mouth had better not have been born at all. It is important for a parent to know whether the presence of a natal or neonatal tooth is significant. I was once asked by a father to examine his newborn and only son, who showed a tooth at birth, and it was disconcerting to find the baby with physical defects and a suspicion of mental defect. The medical literature on natal and neonatal teeth gives no hint of any probable or possible associated anatomical defects.

Brennemann[1] states that the physician, in his routine examination of the infant, should be concerned with the orderly arrival of the deciduous teeth. He does not explain why there should be this concern or what should or can be done about it if their arrival is not orderly. He gives a table of order and approximate times of

TABLE I. NORMAL RANGE OF TIME FOR THE ERUPTION OF THE DECIDUOUS TEETH (BRENNEMANN)

Deciduous Teeth	*Time of Eruption (in months of age)*
Two lower central incisors	5 to 10
Two upper central incisors	8 to 12
Two upper lateral incisors	9 to 13
Two lower lateral incisors	10 to 14
Two lower anterior molars	13 to 16
Two upper anterior molars	13 to 17
Four canines	16 to 22
Four posterior molars	24 to 30

arrival of the milk-teeth (Table I); the full set should have appeared by the end of the 3rd year. Brennemann, however, remains of opinion that much additional study of individual babies will be needed before we can interpret any potential significance that a variation from the usual may have.

Ferguson, Scott and Bakwin,[2] in their study of the growth and development of Negro infants, give the mean age of eruption of the first tooth as 29 weeks for both sexes, and compare this with White infants, in whom the age is 29·1 weeks for males and 31·6 weeks for females. These figures are for hospital and clinic cases, but when their Negro private cases are added in the mean age for Negro infants becomes 27·7 weeks for males and 28·0 weeks for females. Perhaps these differences in times of eruption are of no significance when the numbers are taken into consideration. These authors make no mention of the earliest or latest time of eruption of the first tooth; they only give the mean with a standard deviation.

By birth the process of calcification has begun in all the deciduous teeth and within 3 weeks after birth there is radiological evidence of a deposition of mineral in the tips of the cusps of the first permanent molars. Precocious dental development without known cause has been recorded several times. There is evidence that the ancient Greeks and Romans knew of babies born with erupted teeth. Massler and Savara[3] reviewed a series of 24 cases of natal and neonatal teeth which had been reported from 1900 onwards. In 1877 Fleischman collected 20 instances, and Ballantyne 70 in 1896. Walker[4] wrote about a first tooth erupting at 2 weeks (dentitio neonatalis) and Briasco[5] discussed homozygous twins with a prenatal eruption of teeth—a most rare occurrence. Holt[6] wrote of a family in which 3 members in 3 successive generations were born with teeth—also most rare. These natal or prenatal teeth appear almost invariably to be one or both of the lower incisors. A suggested likely contributory cause for this very early eruption is injury to the tissue overlying the deciduous tooth, of which the enamel of the incisory edge has formed completely. McDonald[7] mentions that the frequency of cases of natal teeth has been assessed as 1 in 2,000 births, and that such cases have not had associated systemic disturbances. He proposes that a natal tooth should be regarded simply as a premature eruption and as an indication that an early eruptive pattern of the remaining teeth is to be expected.

Some little attention should be paid to the possibility of the tooth or teeth present at birth being supernumerary, that is, preceding the eruption of the deciduous tooth. Looseness and a lack of root-formation are not to be considered diagnostic of supernumerary teeth, because true deciduous teeth may be similarly affected. Only a radiological examination will make it possible to diagnose a supernumerary tooth; such an examination will show the deciduous tooth in its developmental crypt. Very few cases of supernumerary teeth confirmed by X-ray are on record.

Studies on the normal eruption of the deciduous teeth have not mentioned an eruption of the first tooth earlier than the 4th month or later than the 13th month. Like most family physicians, I can agree with these considerable variations. In my experience, however, the infant (a girl) who took the longest time to cut her first tooth was 14 months and 4 days old (430 days). Her mother did show some concern over the delay, but she was partly reassured by the fact that her 3 older children had also taken their time over the process. She did not know the exact age at which their first tooth came, but she was inclined to look upon the delay as a family trait. I have found no mention of so late an eruption of the first deciduous tooth but Falkner[8] refers to 3 infants who were in the 12–18 months age-group (in which my particular infant falls) when their first tooth erupted; he does not give their exact age. Falkner also remarks upon the impression (it seems to be no more than an impression) that delays in deciduous dentition are commoner in females.

There is no available evidence that a marked delay in the eruption of the first tooth is followed by any special abnormality of the eruptive pattern or in any special teething difficulty. Holt[6] observed that the first tooth not uncommonly arrived in the 4th month and in many healthy infants it did not come through before the 10th month, and that occasionally he saw the first tooth at 13 months in infants who appeared perfectly healthy, nor was there any abnormality with the teeth that followed. He was careful to exclude children with such conditions as cretinism and rickets.

Perhaps a clue to the understanding of the precocious development of teeth will be found among such observations as those made by Mouriquand and Boulez.[9] These authors recorded the effect of massive doses of vitamin D upon a 19-months-old girl, and remarked especially upon the sudden eruption of 6 teeth in 5 days (2 teeth in 1 day) as a result of the ingestion of 15 mg. of vitamin D_2; but they felt bound to record also that in the same infant at 1 year of age there had been restlessness, stomatitis and general malaise accompanying the eruption of 3 teeth within a few hours when no special medicament was given. Mouriquand[10] in the same year reported on the accelerated or explosive eruption of teeth attributable to hypervitaminosis D, also admitting to an abnormal tendency of a congenital, hereditary or familial nature.

Apart from the foregoing a delay in the eruption of the primary teeth beyond 1 year of age might be related to a systemic condition which is most likely to lie among a group which includes mongolism, cleidocranial dysostosis, cretinism, rickets, and congenital syphilis.

CONCLUSION

It has been stated that inheritance of dental anomalies is a recognized factor and a familial characteristic well above the limits of chance. Brennemann, however, asserts that there is little scientific knowledge of heredity of dental anomalies; in the literature there is scant agreement on the extent of any genetic influence on abnormalities other than missing teeth, opalescent teeth, and anomalies of form. The general conclusion from this study is that the time of eruption of the first deciduous tooth, no matter how early or how late, has no unwelcome significance at all if due attention has been paid to exclude associated congenital anomalies or systemic pathology; and that, if eruption is unduly delayed, probably only if there is no familial or hereditary trait need it be thought advisable to resort to radiographic examination to confirm or allay parental concern.

SUMMARY

An account has been given of the variation and the extremes of time for the appearance of the first deciduous tooth and the possible significance of precocious and delayed dentition discussed.

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