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The clinical oro-facial findings of an 11-year-old Japanese boy with 47, XYY: A case report

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Abstract 47, XYY is a sex chromosome-number disorder occurring in males. Pediatric dentists seldom report encountering 47, XYY males, probably because there are no overt signs of the disease. The purpose of this report is to present the clinical oro-facial findings of the case of a 47, XYY boy based on cephalometric analysis and study model examinations as well as micro-CT measurement of tooth mineralization. An 11-year-old Japanese boy was referred to our clinic for extraction of primary teeth because of their prolonged retention. He had 47, XYY disorder, pulmonary hypertension, and slight mental retardation. Cephalometric analysis and study model examinations that included a comparison of tooth size and arch assessments were performed. A further attempt was made to demonstrate the degree of dentin mineralization in primary molars. The boy's height and weight were normal but his head circumference had exceeded the 94th percentile since 2 years of age. The cephalometric analysis showed an increase in the lower facial height and bimaxillary protrusion with a longer mandible. Study model examination revealed that the mesio-distal crown widths of all erupted primary and permanent teeth were larger than the standard values, except for the mandibular permanent canines. The degree of dentin mineralization was almost normal in the crown and root areas. A profilogram showed an increase in the lower facial height and bimaxillary protrusion with a longer mandible. The dental arch showed a remarkably contracted width but an extended length. The crown width was larger than the standard values, but the distribution of the degree of dentin mineralization differed

little from normal.

Key words 47, XYY males, Cephalometric analysis, Dental arch, Dental mineralization degree, Tooth size

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