

**Abstract:**

The upper lateral incisor in humans is often affected by dental anomalies that might be explained developmentally. To address this question, we investigated the origin of the deciduous upper lateral incisor (i2) in normal human embryos at prenatal weeks 6–8. We used serial frontal histological sections and computer-aided 3D reconstructions. At embryonic days 40-42, two thickenings of the dental epithelia in an “end-to-end” orientation were separated by a groove at the former fusion site of the medial nasal and maxillary processes. Later, these dental epithelia fused, forming a continuous dental lamina. At the fusion site, i2 started to develop. The fusion line was detectable on the i2 germ until the 8th prenatal week. The composite origin of the i2 may be associated with its developmental vulnerability. From a clinical aspect, a supernumerary i2 might be a form of cleft caused by a non-fusion of the dental epithelia.