Connate Incisors in a Pre-Columbian Mandible from Nasca, Peru

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While examining the skeletal material excavated from the Pre-Colombian site of Pueblo Viejo, Nasca, Peru, one of us (AGD) found a lower jaw of an infant possessing connate teeth (Fig. 1). This was the only case of connate teeth in this collection of some 214 skeletons. The individual came from the Huari cultural level which has been dated at 600 to 1,200 AD. The deciduous teeth were all fully erupted and the permanent lower first molars were visible in their crypts.

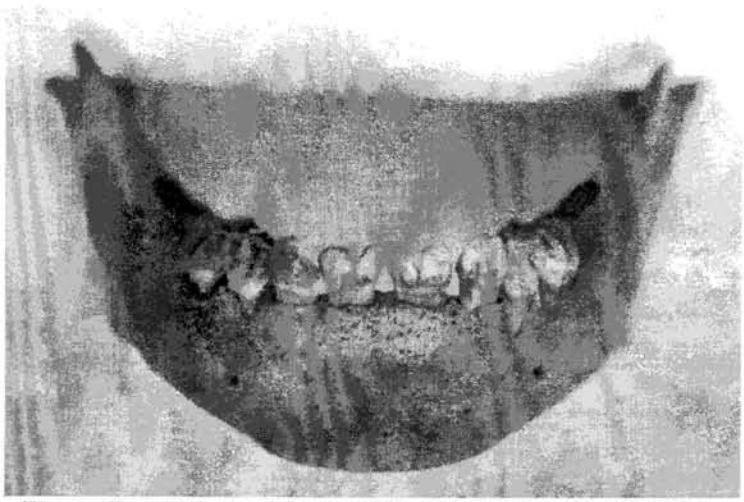

Fig. 1. Connate incisors in mandible of infant from Pueblo Viejo, Nasca, Peru. Photo by Andrea Drusini.

The teeth involved are the lower left di1/di2 and the lower right di1/di2, representing the combination of the two deciduous teeth from each side of the jaw. Incidentally, many earlier reports of connate teeth indicate that the lower deciduous incisors are more often involved in connate formation than other deciduous or permanent teeth (see Winkler and Swindler, 1993, for a review).

The crowns are separate and fully formed and have developed from what appears to be a common root. Unfortunately, no radiographic equipment was available at the site. The root of the left connate tooth is slightly wider than that of the right and the crowns of both teeth are separated at the cemento-enamel junction. As the tooth buds grew, the crowns of both incisors appear to have diverged more obliquely than the crowns of the lateral incisors, resulting in a V-shaped separation between the two crowns. Moreover, the crown morphology of these connate deciduous incisors indicates their allocation to di1 and di2, as the latter tooth is mesiodistally wider than the former (Fig. 1).

The developmental mechanism or mechanisms responsible for connate teeth are not clear, but may involve different ontogenetic processes resulting in such tooth formation (Miles and Grigson, 1990). In the present case, it appears to us that these deciduous incisors were formed as a result of the fusion of the di1 and di2 tooth buds during development with subsequent early separation of the crowns.

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"CANNIBAL" MOVES DOWN UNDER

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For those who are not familiar with "Cannibal," this is the name by which Steve Molnar refers to his cam-activated tooth wear machine described many years ago (Brace and Molnar, 1967; Molnar, 1968a,b). Having recently seen "Cannibal" in action, I must say that the name is not in the least inappropriate. To paraphrase Steve's description, the machine is a motor driven, cam activated device that operates cables, simulating the muscles of mastication. The lower dental cast is fixed on the mechanical mandible and