Brief Communication: Occurrence of an Eighth Cusp on Primary Second Mandibular Molars of a Contemporary Argentinean Child

Carlos David Rodríguez Florez[1*], Gabriel Mario Fonseca[2], and Maria Teresa de Villalba[3]

[1]Cátedra de Antropología Biológica y Cultural, Facultad de Ciencias Exactas, Físicas y Naturales, [2]Cátedra de Anatomía Patológica B, Facultad de Odontología, and [3]Cátedra de Ortodoncia, Facultad de Odontología - Universidad Nacional de Córdoba, Argentina.

ABSTRACT: The presence and asymmetry of an eighth cusp observed on the primary second mandibular molars of an Argentinean boy is described. *Dental Anthropology* 2006;19(3):83-85.

Dental morphology trait expressions have been used in anthropology and forensic sciences for determination of biological and geographical affiliations. Variations in morphology of crowns may be manifest in the primary and/or permanent dentitions. Dental variation is heritable, is caused by multiple genes, and is little influenced by environmental factors. Traditionally, three, four, five, six or seven cusps, specifically the protoconid, metaconid, hypoconid, rntoconid, hypoconulid, entoconulid and metaconulid, have been reported in morphological descriptions of lower molars for various human groups (Axelsson and Kirverskari, 1979; DeVoto and Perroto, 1972; Hanihara, 1967; Harris and Bailit, 1980; Morris, 1965; Sciulli, 1977; Schroeder *et al*., 1983; Scott and Turner 1997; Suzuki and Sakai, 1973). This brief communication reports on the presence and asymmetry of a possible eighth cusp on mandibular primary second molars of a contemporary Argentinean boy.

MATERIALS AND METHODS

The teeth of a racially mixed boy five years of age from Cordoba City, Argentina, were examined in situ and on a plaster cast. An unusually shaped accessory occlusal cusp was observed on both the left and right mandibular primary second molars. Size of this eighth cusp was measured with sliding calipers. This case report is part of an anthropological study carried out on material provided by the Departamento de Ortodoncia, Facultad de Odontología, Universidad Nacional de Cordoba, Argentina.

RESULTS

Figures 1 and 2 illustrate the presence and bilateral asymmetry observed on mandibular primary second molars. A small additional cusp occurs between hypoconulid and entoconulid cusps. The anomalous cusp is larger on the right molar (diameter: 0.245 mm) than the left (diameter: 0.165 mm).

DISCUSSION

This accessory, eighth cusp has been not reported previously. This rare variant on anomalous lower primary molars provides an interesting record of eighth cusp in human dental morphology. Bilateral presence and asymmetrical appearance of the eighth cusp suggest a possible factor of heritability in the expression of this infrequently human molar form. Brabant suggests that primary second mandibular molars with five cusps are most common. Six cusps are less frequent (2% to 30%), and the seven-cusp molar—with a cusp of Jørgensen (metaconulid)—is found in less than 10% of cases (Brabant, 1967). Kallay's (1966) classification

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*Correspondence to: Carlos David Rodríguez Florez, Cátedra de Antropología Biológica y Cultural, Facultad de Ciencias Exactas, Físicas y Naturales - Universidad Nacional de Córdoba, Argentina.
E-mail: david@syllabapress.com

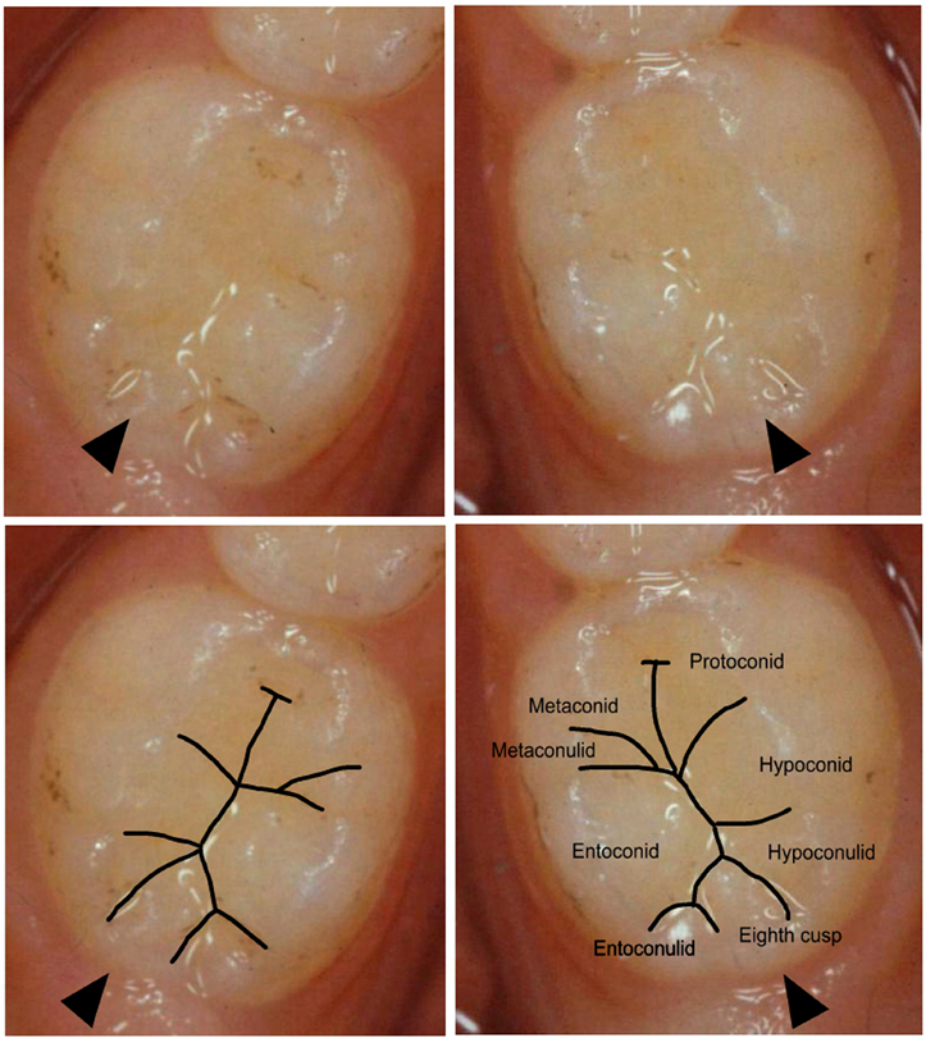

Fig. 1. Occlusal view of case (*in situ*).

could be used to label this eighth cusp, perhaps the Protuberantio apulparis sited in the distal occlusal area of primary second lower molars. As mentioned by Brothwell (1967), the phenomenon of increasing world contact, immigration, and interbreeding between previously more isolated communities can produce new forms that enrich the variation observed in the human dentition.

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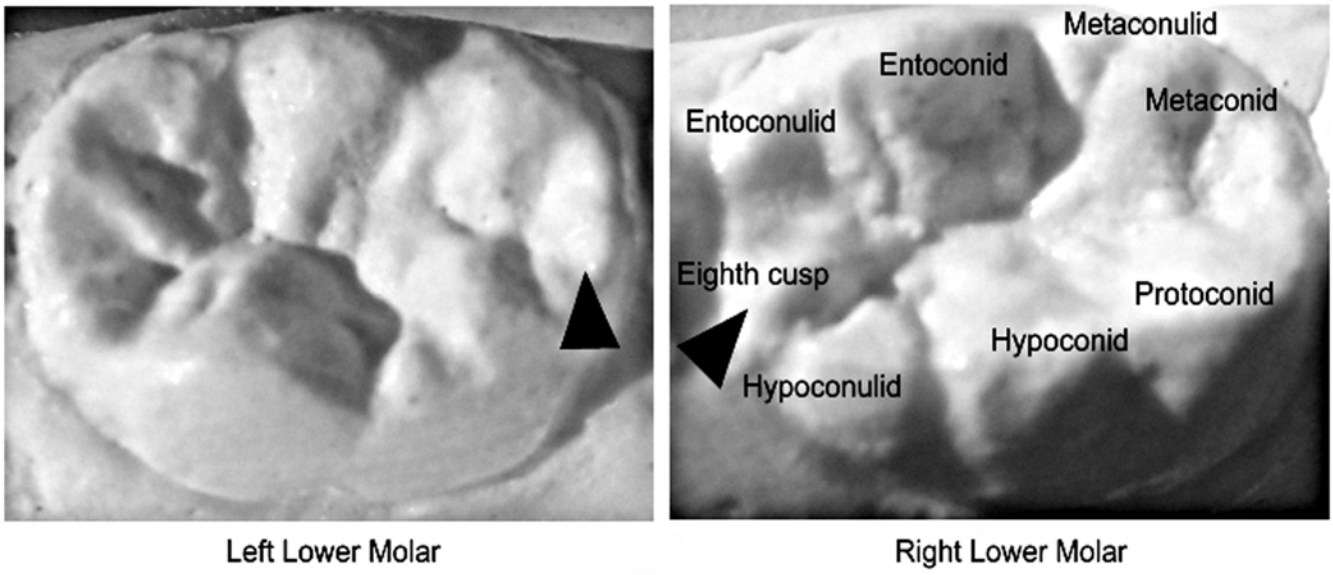

Fig. 2. Occlusal view of the mandibular second molars as seen on the plaster cast.

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