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## The palatally displaced canine as a dental anomaly of genetic origin

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### ABSTRACT

Palatal displacement of the maxillary canine tooth is a positional variation thought generally to develop as a result of local factors, such as retained deciduous canines, anomalous permanent lateral incisors, or dental crowding. This article contributes biologic evidence pointing to genetic factors as the primary origin of most palatal displacements and subsequent impactions of maxillary canine teeth. Data gathered from multiple sources are integrated to support a genetic etiology for the palatally displaced canine (PDC) on the basis of five evidential categories: 1. Occurrence of other dental anomalies concomitant with PDC; 2. Bilateral occurrence of PDC; 3. Sex differences in PDC occurrence; 4. Familial occurrence of PDC; 5. Population differences in PDC occurrence. From analysis of available evidence, the PDC positional anomaly appears to be a product of polygenic, multifactorial inheritance.

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