BILATERAL AGENESIS OF PERMANENT MAXILLARY CANINES IN A LIBYAN ORIGIN
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ABSTRACT
Exclusive agenesis of maxillary permanent canines is extremely rare. There are only a few reported cases of this condition in the literature. This paper reports a case of bilaterally missing canines in a healthy 23 year old female of Libyan origin.

Key Words: Maxillary Canines; Aplasia; Bilateral; Libyan Origin; Congenitally Missing

Introduction
Canine is one of the most variable positioned teeth. It can be found palatally or facially displaced or ectopically erupted from the dental arch. On the contrary, canine agenesis is a rare finding in Caucasian populations, but it may be relatively more common in Asian groups.1 This dental anomaly is firstly influenced by genetic, and less often by systemic and environmental factors. Generally, it can occur in association with other dental disturbances or as a solitary anomaly.1,2 Prevalence of agenesis permanent teeth varies between 4.5% and 7.4% in general Caucasian population.1,3 Exclusive aplasia of maxillary permanent canines is rare.4 There are only a few cases reported in the literature.2,4,7 This paper presents a case report of bilaterally missing maxillary permanent canines in a female patient of Libyan origin.

Case Report
A 23 year old female patient of Libyan origin reported to the outpatient Department of the Faculty of Dental Surgery, Al Jabal al Gharbi University, Zawia, Libya with a complaint of unerupted permanent maxillary canines bilaterally (Figure 2). The mandibular permanent canines were confirmed congenitally missing maxillary permanent canines, mandibular second molars, maxillary second molars and mandibular canines.1,3 The primary canine is the most commonly found retained deciduous tooth because it is more likely that a permanent canine will deviate from its normal course of eruption and become impacted.2,8-11 Three deciduous canines were retained in the present case. The mandibular permanent canines were impacted. Congenital canine agenesis is considered a rare condition which has been described mainly in oriental populations. Statistical data on canine agenesis differs in the literature. Permanent canine agenesis ranged from 0.01 to 2.10 per cent.2,12 The developmental absence of permanent canine has been reported by Fukuta et al to be higher in female patients.9 The present case reports canine agenesis in a 23 year old female and it is in accordance to literature.

The maxillary permanent canine develops beneath the orbit, superior and palatal to the lateral incisor and the first premolar. Eruption occurs in a mesial and lateral direction.2,13 Genetic factors, bone disease, tumors, cysts, crowding and persisting deciduous canines have been attributed as causes of ectopic eruption of permanent maxillary canines.2,14 Early detection of ectopic maxillary canine teeth is important if optimum interceptive treatment is to be carried out however, late recognition and referral is common.2,12 This is due to the anatomic similarity to its deciduous predecessor and its late eruption age compared with the rest of the dentition.2,8 The average age for shedding the deciduous maxillary canines is 11.6 years for a male and 10.75 years for a female.2,8,9 The crown of the canine should be detectable as a bulge in the buccal sulcus as early as eight years of age.1,3,15 Where the crown cannot be palpated by ten years of age, ectopic eruption should be suspected and radiographic analysis is mandatory before treatment planning.2

Graber claims that congenital absence of teeth is largely due to heredity factors and, when it occurs, family history is im-
import but, the family history was non-contributory in our patient. The prevalence of agenesis in the permanent dentition shows great variations between populations. Considering the evolutionary perspective, the developmental absence of one or more teeth is not uncommon in the modern human stomatognathic system. As a general rule, that if only one or a few teeth are missing, the missing germ will be the most distal tooth of any given type. Agenesis in the permanent dentition is usually accompanied by retention of primary teeth. Persisting primary canines are more likely to show minimal root resorption. Retaining the primary canines is of value in treatment planning. Retained primary teeth with minimal root resorption can preserve the dental arch integrity, providing good potential for later prosthetic rehabilitation. In our patient, the mandibular deciduous canines showed minimal resorption.

Conclusion
In conclusion this paper reports a rare case of bilateral congenitally missing maxillary permanent canines in a 23 year old female of Libyan origin and its management options. Treatment planning should be done based on the presentation of individual patient and considering their priorities.

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References

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