LETTER TO EDITOR

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To Seal or Not to Seal the Groove of the Carabelli Trait?

Czy konieczne jest uszczelnianie bruzd w przypadku występowania cechy Carabellego?

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Abstract

The article entitled “The Prevalence and Expression of Carabelli Trait in Permanent and Deciduous Molars”, published in issue 2014, 51, 3 of “Dental and Medical Problems”, evaluates the prevalence and expression of the Carabelli trait in permanent and deciduous molars. This article provides valuable information regarding variations in the Carabelli trait in a Polish population. One of the clinical issues in sealing the pit and fissures of permanent maxillary molars is the application of a sealant in the groove of the Carabelli trait. Improper clinical judgment and technique may lead to initiation of the carious process in the region. The results of the above-mentioned article published in the journal indicate that the Carabelli trait varies in shape and size. Therefore, meticulous clinical evaluation of the groove of the Carabelli trait and assessment of the need for application of a sealant may decrease the risk of future caries incidence. This article is a letter to the editor regarding this subject (Dent. Med. Probl. 2015, 52, 1, 117–118).

Key words: Carabelli trait, pit and fissure sealants, permanent dentition.

Słowa kluczowe: cecha Carabellego, uszczelniające bruzd, uzębienie stałe.

The Carabelli trait is an anatomical variation mostly seen in permanent maxillary first molars. The article entitled “The Prevalence and Expression of Carabelli Trait in Permanent and Deciduous Molars”, published in issue 2014, 51, 3 of “Dental and Medical Problems”, evaluates the prevalence and expression of the Carabelli trait in permanent and deciduous molars. This article provides valuable information regarding variations in the Carabelli trait in a Polish population.

One of the clinical issues in sealing the pit and fissures of permanent maxillary molars is the application of a sealant in the groove of the Carabelli trait. Improper clinical judgment and technique may lead to the initiation of the carious process in the region. A survey carried out on primary school children revealed that in 66% of grooves of the Carabelli trait, the sealant was partially or completely lost [1]. The Dahlberg classification [2] is an appropriate method for clinical appraisal of the Carabelli trait in maxillary molars. Based on this classification, if present, the Carabelli trait can be expressed in 7 forms, ranging from a small vertical ridge and groove to a large tubercle with free apex. The depth of the groove may indicate the need for application of the sealant. In cases of the presence of a deep groove, which can impede mechanical cleansing of the region, application of a sealant may be necessary. But if the groove is subtle and without accumulation of bacterial plaque or food debris, placing the sealant is needless.

Another issue in sealing the groove of the Carabelli trait is isolation of the tooth. Inadequate isolation may lead to loss of the sealant in a case where placement of the sealant was necessary, and thus can initiate the carious process in the permanent maxillary molars.

The results of the above-mentioned article published in the journal indicate that the Carabelli trait varies in shape and size. Therefore, meticulous clinical evaluation of the groove of the Carabelli trait and assessment of the need for application of a sealant may decrease the risk of future caries incidence.
References


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