

POLYMORPHISMS OF GSTM1, GSTT1 AND GSTP1 AND THEIR POSSIBLE ASSOCIATION WITH THE DEVELOPMENT OF DENTAL CARIES. PILOT STUDY

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ABSTRACT

Objective: The purpose of this investigation was to study the relationship between the polymorphisms of GSTM1, GSTT1 and GSTP1 with the susceptibility to dental caries in Mexican. **Methods:** In a group of 64 individuals, the DMFT index and GST polymorphisms were determined and related. **Results:** The frequencies for GSTM1 were 48.4% with the wild allele and 51.6% null, with a mean DMFT of 6.1 and 5.5 respectively. For GSTT1 were 73.4% with the wild allele and 26.6% null, with a mean DMFT of 6.6 and 5.8, respectively. In GSTP1 exon 5, 23.4% with the wild allele, 53.2% (a/b) and 23.4% (b/b), the mean DMFT was 4.3, 6.6 and 5.9 respectively. 100% had the GSTP1 exon 6 wild genotype, with a mean DMFT of 6.4%. In the combined genotypes, the lower DMFT corresponds to the GSTM1 wild type genotype, GSTT1 wild type, GSTP1 exon 5 wild type, GSTP1c wild type and the highest DMFT value to GSTM1 null genotype; GSTT1 null; GSTP1 exon 5 a/b; GSTP1 exon 5 a/a. **Conclusions:** The results show the possible association between GST polymorphisms and the susceptibility to develop dental caries due to alteration of the enzymatic activity, this provides evidence that the genetic load may be a risk factor to dental caries.

KEYWORDS: Caries, Glutathione S-Transferase, Polymorphisms, Oxidative Stress & DMFT