Analysis of the prevalence of polymorphisms in the glutathione S transferase gene (GST) in cataract patients from Goiânia

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ABSTRACT. The aim of this study was to determine the prevalence of polymorphisms in the glutathione S-transferase genes GSTM1 and GSTT1 in patients with lens opacity (cataract). Peripheral blood samples were obtained from male and female patients (N = 23) with cataract. The GSTM1 and GSTT1 polymorphic regions were amplified by polymerase chain reaction, and the amplification products were electrophoresed on a 2% agarose gel. The obtained bands were visualized
by staining with ethidium bromide. The results were compared by a chi-square test using the BioEstat software (v.5.0). The frequencies of the $GSTM1$- and $GSTT1$-null genotypes were higher than those of the $GSTM1$- and $GSTT1$-present genotypes. The frequency of $GSTT1$-null genotypes was approximately 1.7 times higher than that of $GSTM1$, which was a statistically significant difference ($P = 0.0019$). Although a consensus remains to be reached on the correlation between genetic polymorphisms in GSTs and cataract susceptibility, the observations from most scientific studies are similar to those reported in this study. Thus, we conclude that the absence of these genes, particularly $GSTT1$, is correlated with the development of lens opacity.

**Key words:** Cataract; $GSTM1$; $GSTT1$; Polymorphism