

***MTHFR* C677T Polymorphism and Risk of Acute Lymphoblastic Leukaemia in Mexican Population**

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ABSTRACT The C677T polymorphism of the *MTHFR* gene has been frequently associated with acute lymphoblastic leukaemia (ALL) around the world. Therefore, the objective of this study was to determine whether the *MTHFR* C677T polymorphism is associated with ALL in Mexican children and adults. A case-control study was conducted on 243 patients with ALL (136 children and 107 adults) and 379 healthy controls. Genotyping of the C677T polymorphism was performed by the polymerase chain reaction-restriction fragment length polymorphism method. The frequency of the T allele was forty-three percent, fifty-two percent, and forty-six percent in children, adults, and controls, respectively. No risk of ALL was found for T allele carriers in children [OR=0.81 (0.52-1.25), P=0.33], but an increased risk was detected in adults [OR=4.98 (2.24-11.10), P<0.001]. The findings in children agree with most of the studies but are discordant with those reported in adults. These differences could be due to ethnicity, genetic background, sampling, and methodology.