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Association of TP53 gene codon 72 polymorphism with endometriosis in Mexican women

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ABSTRACT. The TP53 tumor suppressor gene plays an important role in cell cycle regulation; polymorphisms of this gene have been associated with endometriosis. We examined the role of TP53 codon 72 polymorphism by comparing genotypes of 235 healthy Mexican women (controls with surgically excluded endometriosis) with the genotypes of 151 Mexican women with endometriosis. The observed genotype frequencies for controls and endometriosis patients were 8 and 22% for proline/proline (Pro/Pro), 30 and 34% for proline/arginine (Pro/Arg), and 62 and 44% for arginine/arginine (Arg/Arg), respectively. We found that odds ratio (OR) = 3.3; 95% confidence intervals (95%CI) = 1.7-6.4; P = 0.0001. The association was also evident in the comparison of the distributions of genotypes Pro/Pro and Pro/Arg in patients with moderate-to-severe endometriosis; OR = 1.9; 95%CI = 0.95-3.9; P = 0.049. We suggest

that genotype Pro/Pro of codon 72 polymorphism in TP53 contributes significantly to endometriosis susceptibility in the Mexican population.

Key words: TP53 gene; Polymorphism; Codon 72; Mexican population; Endometriosis

