

Study of the allelic variants CYP2C9*2 and CYP2C9*3 in the Peruvian mestizo population Estudio de las variantes alélicas CYP2C9*2 y CYP2C9*3 en población mestiza peruana

Alvarado, Ángel Tito

Muñoz, Ana María

Loja, Berta

Miyasato, Jessica Michiko

García, Jorge Antonio

Cerro, Roberto Andrés

Quiñones, Luis Abel

Varela, Nelson Miguel

Introduction: CYP2C9 metabolizes approximately 15% of the prescribed drugs. Its gene has alleles whose frequencies differ between ethnic groups and populations. The alleles CYP2C9*2 and CYP2C9*3, account for an enzyme with decreased activity, and their frequencies have not been determined in the Peruvian mestizo population. Objective: To characterize the frequencies of the allelic variants *2 (rs1799853) and *3 (rs1057910) of CYP2C9 gen, in the Peruvian mestizo population from Lima, Tacna y Junín. Materials and methods: An observational, prospective cross-sectional with non-probabilistic sampling, for convenience and incidental was performed. 218 subjects after signing the informed consent, were incorporated according to the inclusion and exclusion criteria. Genomic DNA buccal tissue sample was obtained by swab. The detection of the genotypes CYP2C9*2 and CYP2C9*3 was made by the real-time polymerase chain reaction system using TaqMan probes. Results: Genotyping results revealed that CYP2C9*2 and CYP2C9*3 variants have low frequencies (0.046 and 0.062, respectively). The frequency of intermediate metabolizers was 15.13% (CYP2C9*1/*2: 5.96%; CYP2C9*1/*3: 9.17%) and of slow metabolizers it was 3,22% (CYP2C9*2/*2: 1.38%; CYP2C9*3/*3: 1.38%; CYP2C9*2/*3: 0.46%). Conclusions: It was possible to determine the genotypic and allelic frequencies for the variants *2 and *3 of the

CYP2C9 gene in a non-probabilistic sample of the Peruvian mestizo population. The frequencies obtained (0.046 and 0.062, respectively) are among those expected for a South American mestizo population with Amerindian, European, African and Asian descent.