

Distribution of alleles of DRD4 and DAT1 genes of the dopaminergic system in the mixed Chilean population

Distribución de alelos de los genes DRD4 y DAT1 del sistema dopaminérgico en la población mixta de Santiago de Chile

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Background: Genes for dopamine receptor DRD4 and dopamine transporter DAT1 are highly polymorphic. Two alleles of these genes, namely the DRD4.7 and the DAT1*9 are frequently associated to the attention deficit disorder with hyperactivity. In Europe, the allele for DRD4 receptor with four repetitions (DRD4.4) has the highest frequency, with a median of 69%, followed by DRD4.7, with a frequency of 15%. South American indigenous populations have higher frequencies for DRD4.7 (61%) than for DRD4.4 (29%). The ten repetition allele for DAT1 transporter has a high frequency among Europeans (72%) and Amerindians (100%). The allele DAT1*9 is the second most frequent allele. **Aim:** To study the frequency of DRD4 and DAT1 alleles in a Chilean population sample. **Material and methods:** One hundred serum samples were obtained from blood donors in two public hospitals in Santiago. Polymorphic regions for DRD4 and DAT1 were amplified by polymerase chain reaction. **Results:** The allele DRD4.4 had a frequen