Determination of *CYP2C19* and *CYP2D6* genotypes in a first-episode psychotic sample

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Introduction

Genetic factors contribute to psychotropic drug response. Some *CYP2D6* and *CYP2C19* genes polymorphisms have been described to have an important influence on the required therapeutic doses of antidepressants and antipsychotics. The knowledge on this can help to avoid and manage drug-drug interactions.

Objective

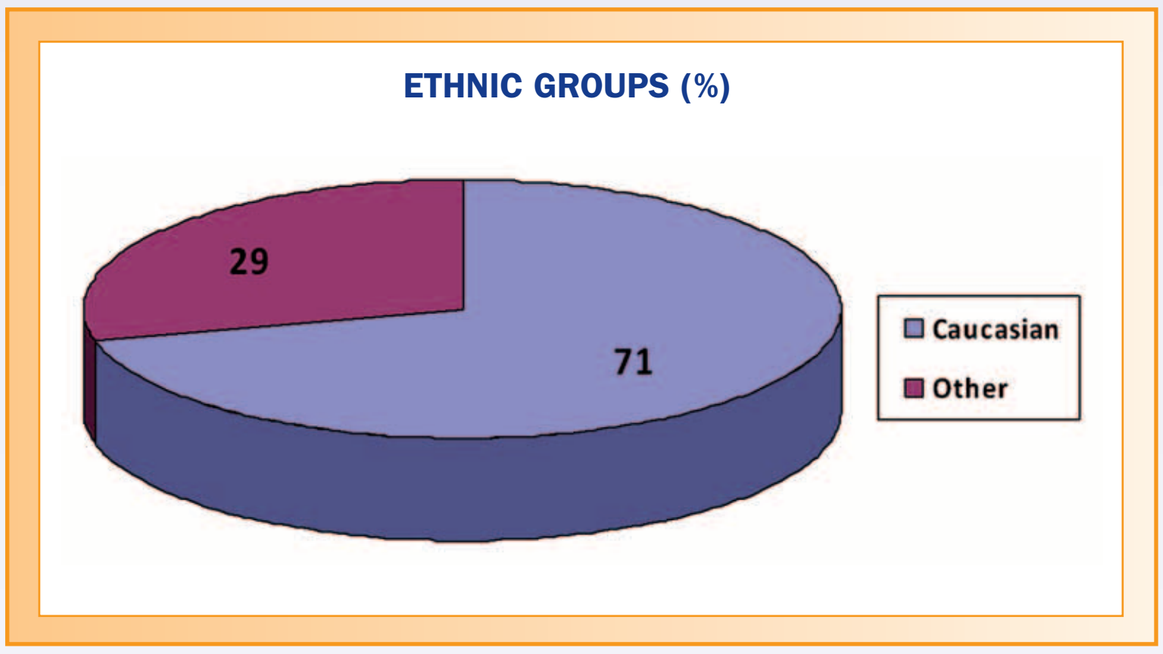
To describe the prevalence of the different phenotypes for genes *CYP2C19* and *CYP2D6* in a population of first episode psychotic patients and its relation to clinical outcome, dose and race during a 2 years follow-up period.

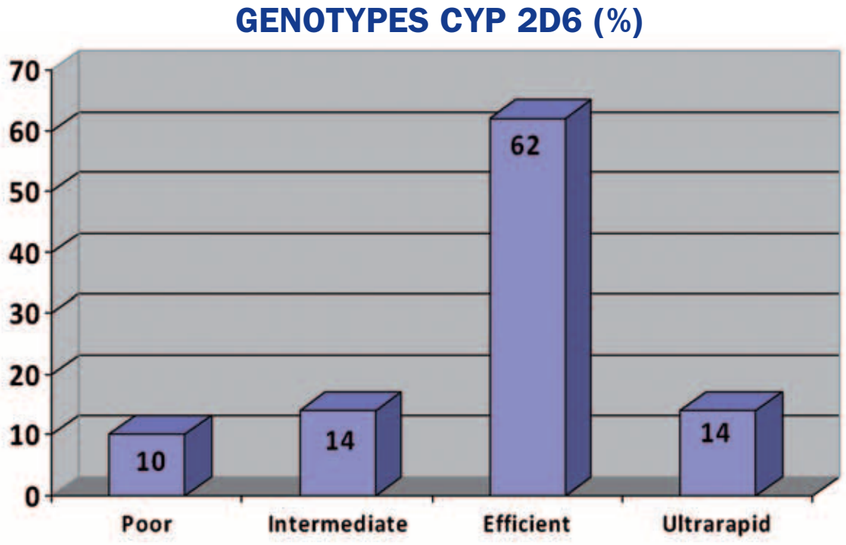
Methods

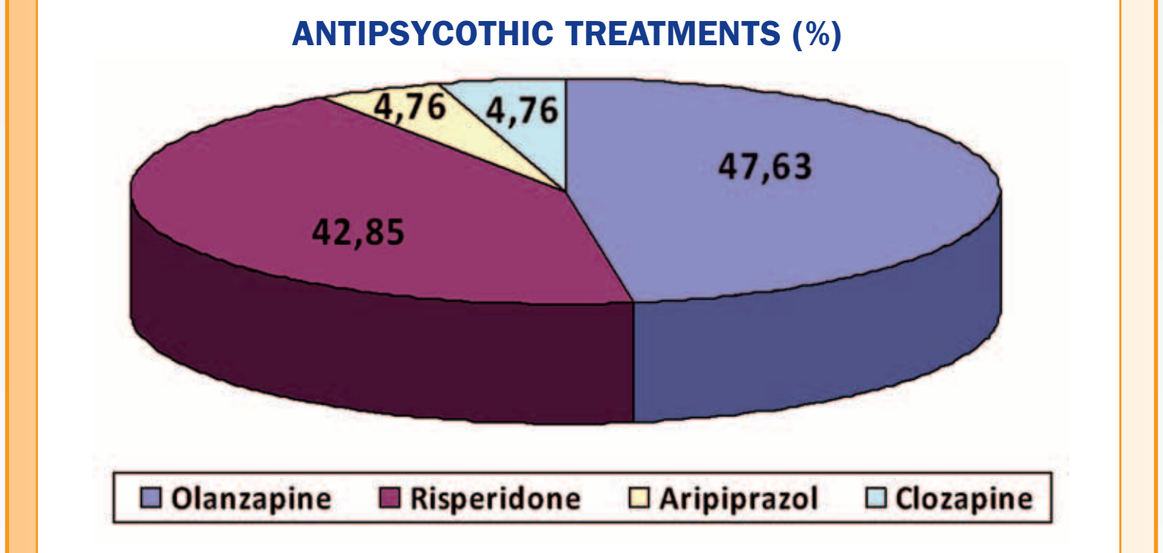
Patients with a first psychotic episode were recruited form January 2006 to January 2009. Clinical and treatment related variables were registered at baseline and during a 2 years follow up period. *CYP2D6* and *CYP2C19* genotype were determined.

Results

From the 48 initially recruited patients, 21 (44%) were genetically determined. Amongst them, 13 subjects (62%) presented an efficient phenotype for the *CYP2D6*, 3(14%) presented an increased phenotype (ultra rapid metabolizers), 3 (14%) were intermediate metabolizers and 2 (10%) were poor metabolizers. All the patients presented an efficient phenotype for *CYP2C19*. The patients were Caucasian (71%) and other ethnic groups (29%). Patients were treated with risperidone (42,85%), olanzapine (47,63%), clozapine (4,76%) and aripiprazol (4,76%).







Conclusions

Most of the patients presented an efficient phenotype. However a considerable proportion was ultra-rapid or poor metabolizers. Due to the small sample size, differences between ethnic groups, relapse or drug intolerance could not be found, however first glance differences were not apparent. Further studies using larger samples and considering other confounding factors would be needed.

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