Change of dopamine receptor mRNA expression in lymphocyte of schizophrenic patients

ABSTRACT

The findings indicate that peripheral lymphocytes' dopamine receptors are reactive, and their increased expression may have clinical relevance in determining the subgrouping of schizophrenis.

INTRODUCTION

The dopamine receptors are a class of dopamine-receptor-like molecules that are expressed in the brain and peripheral tissues and were first identified in the 1980s. They have been implicated in the regulation of reward and pleasure in several systems including reward, motivation, reward-seeking, and pleasure-seeking.1,2 However, they are also involved in the regulation of the autonomic nervous system, and a number of studies have demonstrated that dopamine receptor expression is altered in patients with schizophrenia.3,4 In addition, dopamine-receptor-like molecules are involved in the regulation of several diseases including depression, anxiety, and pain.5,6 The dopamine receptors are also expressed in the central nervous system in a variety of tissues, including the brain, the peripheral nervous system, and the spinal cord.7,8 In this study, Schizophrenia is a prevalent mental illness that occurs among adolescents and young adults, but the pathophysiology and etiology of schizophrenia remain unclear. While many studies linking dopamine to schizophrenia have yielded limited evidence, recent research has shown that the "dop" hypothesis is more directly linked to this condition than to actual schizophrenia. However, molecular biology and imaging techniques have also provided inconsistent results. The presence of high affinity binding sites for [3H]spiroperidol in peripheral blood was reported by Le Fur during the early 1980s, but there has been a long-standing debate about whether these sites are genuine dopamine receptors or nonspecific binding locations. Recent findings in molecular biology indicate that peripheral lymphocytes contain mRNA of D3, D4, and D5 dopendyl, which may point to them being legitimate targets for dopingamine. However, the accuracy of these findings and whether they In order to determine if peripheral dopamine receptor mRNA is altered in schizophrenia statically or dynamically, this study was conducted to investigate whether these receptors may be useful as a potential peripheral marker for central schizophrenia.

CONCLUSION

After taking antipsychotics, peripheral lymphocytes' molecular biologically-determined dopamine receptors are reactive, as demonstrated in this study.