Pharmacogenetics of escitalopram and mental adaptation to cancer in palliative care: report of 18 cases

Giulia Schillani[1], Maria Anna Capozzo[1], Daniel Era[1], Maurizio De Vanna[2], Luigi Grassi[3], Maria Anna Conte[4], and Tullio Giraldi[1]

[1]Section of Pharmacology, Department of Life Sciences, University of Trieste, Trieste; [2]Psychiatric Clinic, Faculty of Medicine, University of Trieste, Trieste; [3]Section of Psychiatry, Department of Medical Sciences of Communication and Behavior, University of Ferrara, Ferrara; [4]Hospice, ASS6, S. Vito al Tagliamento, Pordenone, Italy

ABSTRACT

Aims and background. In palliative care, few data are available on the diagnosis and treatment of mood disorders and of difficulties of mental adaptation to cancer for patients in the advanced phases of the disease. SSRI antidepressants are the treatment of choice; the 5-HTTLPR genetic polymorphism of the serotonin transporter (SERT) has been shown in psychiatry to significantly determine the therapeutic response and the incidence of adverse effects. The aim of the present investigation has been therefore to examine the effects of the SSRI antidepressant escitalopram, also considering 5-HTTLPR, on depression, anxiety and mental adaptation to cancer in palliative care.

Methods and study design. Eighteen consecutive depressed patients with different forms of advanced cancer admitted to the Hospice Ass 6 of S. Vito al Tagliamento (Pordenone, Italy) were genotyped for the "s" and "l" variants of 5-HTTLPR and were treated with escitalopram. Their response after two weeks of treatment was psychometrically evaluated.

Results. Treatment with escitalopram significantly decreased anxiety scores on the Hospital Anxiety and Depression Scale (HADS) ($P = 0.006$) as well as anxious preoccupation ($P = 0.007$) and hopelessness-helplessness ($P = 0.017$) scores on the Mini Mental Adjustment to Cancer (Mini-MAC) scale. When patients were stratified by SERT genotype, HADS anxiety was significantly decreased in patients carrying the "s/s" and "s/l" variants ($P = 0.024$), whereas those with an "l/l" genotype displayed a significant reduction of Mini-MAC anxious preoccupation ($P = 0.018$).

Conclusions. The results of this study indicate that the use of SSRI antidepressants is effective in the palliative care of cancer patients, and their action affects not only depression but also the patients' mental adaptation to the disease. These results encourage further examination of these drugs in a larger cohort of patients. The significant contribution of pharmacogenetics indicates the possibility of personalized treatment with SSRIs in palliative care.