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Letters to the editor

The rehabilitation of patients with long-term psychiatric disorders

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The supplement (*Eur Psychiatry* 1996;11(suppl 2)) on "The rehabilitation of patients with long-term psychiatric disorders" is a very interesting issue.

The article by TB Üstün et al about the International Classification of Impairments, Disabilities, and Handicaps (ICIDH, WHO, 1980) summarizes the definitions of the planes of health experience for those readers who do not yet know them. It states: "...handicaps conceptualize hindrances imposed by the society because of a disease or disability" (p51s) and "...consequences of mental disorders in terms of...hindrances imposed by the society" (p53s).

In fact, the definition of handicap in the WHO classification cannot be summarized as hindrances imposed by the society. It is as follows: "In the context of health experience, a handicap is a disadvantage for a given individual, resulting from an impairment or a disability, that limits or prevents the fulfillment of a role that is normal (depending on age, sex, and social and cultural factors) for that individual."

The introduction to the classification states: "handicaps thus reflect interaction with and adaptation to the individual's surroundings." (p14).

One of the proposals now under discussion for the revision of ICIDH is to change the definition of handicap, turning it into the hindrances imposed by the society. No decision has yet been made: it has been argued that the individual's interactions with and adaptation to the surroundings should remain within the scope of the ICIDH, in order to describe the disablement process in a proper way.

The readers of *European Psychiatry* should have access to this information, in order not to replace the present definition by one of the revision proposals.

Üstin TR, van Duuren-Kristen S, Bertolote J, Cooper JE, Sartorius N. The International Classification of Impairments, Disabilities, and Handicaps (ICIDH): mental health aspects of its use in rehabilitation. *Eur Psychiatry* 1996;11(suppl 2):51s–55s

World Health Organization. International Classification of Impairments, Disabilities, and Handicaps. A manual of classification relating to the consequences of disease. First printing. Geneva: WHO, 1980

Increased erythrocyte inositol monophosphatase activity in schizophrenia

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A genetic association found recently in a multicenter European study between schizophrenia and a serotonergic $5HT_{2A}$ receptor gene (Williams et al, 1996) makes an outstanding contribution to the implication of serotonin in the pathophysiology of schizophrenia. Serotonergic $5HT_2$ receptors are linked to the phosphatidyl inositol cycle as a second messenger system, and a key enzyme in this system is inositol monophosphatase (IMP).

In our preliminary study, we confirmed the original finding of Israeli authors (Zilberman-Kaufman et al, 1992) who found an elevated activity of this enzyme in the erythrocytes of schizophrenic patients, using their identical biochemical methodology.

Our sample included 12 patients with schizophrenia (7 male, 5 female), aged 20–44 years (mean 31 years) and 18 patients with depression in the course of affective illness (4 male, 14 female), aged 30–69 years (mean 44 years). The patients were studied during the exacerbation of the illness and were drug-free for 7 to 10 days before the study. The control group consisted of 20 subjects (10 male, 10 female), who were somatically healthy, without any psychiatric history and not taking any drugs.

Erythrocyte inositol monophosphatase activity was assessed by means of the Hallcher and Sherman (1980) method, originally elaborated for brain tissue, further modified by Zilberman-Kaufman et al (1992). In short, the erythrocytes were washed twice with phosphate buffer and hemolysed with digitonin. A hemolisate was incubated in media containing DL-myo-inosito-1-monophosphate (Sigma, I-8511) for 1 hour; the reaction was stopped by adding trichloroacetic acid, 6.1 M. Enzyme activity was expressed as a difference in inorganic phosphate (Pi) liberated per 10^{10} erythrocytes per hour, between media with and without lithium, 30 mM.

The mean activity of IMP (mean ± SD) was in schizophrenic patients 6.75 ± 1.98 μmol Pi/10^{10} cells/h, in depressed patients 6.27 ± 1.73 μmol Pi/10^{10} cells/h and in control subjects 5.65 ± 0.56 μmol Pi/10^{10} cells/h. The difference between schizophrenic patients and control subjects was significant ($P = 0.024$). None of the control subjects had an enzymatic activity value above

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6.20 μmol Pi/10^{10} cells/h while this was the case in 6/12 (50%) of schizophrenic and in 7/18 (39%) of depressed patients. The small number of patients did not allow us to make a more detailed analysis concerning a high IMP activity as related to some clinical features in schizophrenic or depressed patients.

Our preliminary results obtained in drug-free, clinically exacerbated patients with major psychoses underline a possible abnormality of the phosphatidyl inositol system in schizophrenia. An increase of the inositol lipid signaling system in schizophrenic patients was also found by Czechoslovakian authors on platelet model (Ripova et al, 1995). The association between excessive activity of this system and $5HT_2$ receptors may contribute to its possible pathogenetic role in schizophrenia.

In our study, however, mean values of the enzymatic activity of IMP in depressed patients were placed between those of schizophrenic and control subjects, and a proportion of depressive patients had values exceeding the control ones. It is conceivable that the pathology of IMP (and, consequently of $5HT_2$ receptors) may also be found in a subgroup of affective patients, as was suggested in platelet studies (Mikuni et al, 1991).

The enzymatic activity of inositol monophosphatase is now being studied in a large group of patients with major psychoses both during the acute episode and after clinical improvement.

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