

## AWARE OF DEPRESSION 10 YEARS ON: THE IRISH PERSPECTIVE

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The Depression Awareness Campaign in Ireland is being promoted by *Aware*, a voluntary body established in 1985. *Aware* has developed support group meetings for people with depression and their relatives at thirty-two centres throughout Ireland, runs a 'phonenumber counselling service, hosts public lectures, produces information booklets and funds depression research. As part of its Depression Awareness Campaign, *Aware* has disseminated brochures on *Depression in the Workplace* to major businesses, distributed *Depression Recognition* posters to general practice surgeries and *Depression Recognition* bookmarkers to book stores and has participated in, or commissioned several radio and television documentaries, chat shows and advertisements. All of *Aware's* fundraising campaigns have the added benefit of increasing public awareness of depression.

*Aware* has conducted quantitative and qualitative public attitude surveys to identify the level of depression awareness and recognition and to ensure that its publicity campaigns are focused on problem areas.

In a national representative survey, 1,403 people were interviewed on their attitudes to depression and sufferers and their understanding of the aetiology and treatment of depression. Some two-thirds of interviewees regarded depressives as neither mentally ill, weak-willed, nor as feeling sorry for themselves. Stress, bereavement and hereditary were considered the most frequent causes of depression. Seventy-three per cent said that depression could be successfully treated. While 81% recommended getting professional help, only 17% mentioned their G.P. as a source of treatment for depression. Interviewees who had depression or who had a close friend or relative with depression and those who had visited a patient in a psychiatric hospital, expressed more positive attitudes to depression and its management.

A more in-depth study of a sample of seventy-two people drawn from the Electoral Register in Dublin was conducted to explore attitudes to the management of depression in general practice. While 85% expressed satisfaction with the care they received from their G.P. and 94% felt their G.P. listened attentively, only 52% were willing to consult their G.P. for treatment of depression. There was a positive correlation between satisfaction with the care from their general practitioner, willingness to consult the G.P. for personal problems and willingness to consult for depression. Of those would not seek help from their G.P. for depression, 22% considered their G.P. was not qualified to deal with the problem. 20% stated that G.P.s could only prescribe drugs and a further 20% stated a preference for consulting a counsellor, psychiatrist or a friend.

Public's perception of the management of depression in general practice and the problems that underlie it need to be tackled.

## RELATIONSHIP BETWEEN RECOGNIZED DEPRESSION AND SUICIDE IN HUNGARY

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It has been consistently demonstrated that affective disorders are associated with a very high suicidality. The contributing role of depression in suicide mortality may be of particular relevance in Hungary, which traditionally has the highest suicide rate in the world. In agreement with the international data we have found that the vast majority of the 200 consecutive suicide victims have had a recent psychiatric disorder, in 50% primary major depression. Analysing the specific diagnostic subtypes among the 100 consecutive suicide victims with primary major depression, 46% were found to have had Bipolar II depression (depression-hypomania), 1% Bipolar I disorder (depression mania) and 53% non-bipolar major depression. 59% of

the patients had medical contact during the depressive episode, but depression was frequently undiagnosed, untreated or under treated. The regional variations across Hungary in suicide rate, rate of diagnosed depression and the density of working physicians were also examined. A strong positive significant correlation was found between the rate of working physicians and rate of diagnosed depression, and both parameters showed a strong negative correlation with the suicide rate. The more doctors per 100,000 inhabitants, the better is the recognition of depression and the lower is the suicide rate in the given region. These findings are in good agreement with the results of the Gotland Study, i.e. all working physicians have responsibility in reducing suicide mortality via better diagnosis and effective treatment of depression, the most common major psychiatric illness.

## LESSONS FROM THE GOTLAND STUDY "SUICIDE AND EDUCATION — EFFECTS, SHORTCOMINGS, CHALLENGES"

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In the years 1983–1984, the Swedish Committee, for Prevention and Treatments of Depression (PTD) offered an education program to all general practitioners (GP's) on the Swedish island of Gotland. The education has been shown to lead to a significant decrease in inpatient care, morbidity, mortality and costs caused by depressive illness on the island. Unspecific medication decreased and specific antidepressive medication increased.

Assessment of all suicides on Gotland during the 1980's showed that the overall decrease in suicides due to the educational program mainly was caused by the decrease in suicides committed by females with recognized major depression and in contact with general practitioners. This was expected. However, the number of male suicides was almost unaffected by the educational program and the GP's improved ability to diagnose and treat depressions.

We believe that the reason for this is that male depressive suicide victims possibly are not reached by the medical health care system. This might be due to mens alexithymic incapacity to ask for help and/or their atypical depressive, acting out, aggressive or abusive behaviour leading to rejection or misdiagnosis in the health care system. Consequently, under diagnosis and under treatment of male depression exist and maybe the explanation of the paradoxical fact that men in Sweden only are half as often depressed but committing suicide up to five times more often than females in Sweden. New sex specific diagnostic and therapeutic tools as well as sex specific research concerning depression and suicidality is needed. Complementary prevention strategies concerning male suicides are described.

## THE HAMPSHIRE DEPRESSION PROJECT — A MODEL STUDY OF THE EFFECTS OF GENERAL PRACTITIONER EDUCATION ON THE OUTCOME OF DEPRESSION

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A great deal of research suggests that educating general practitioners about various facets of depression from recognition to management improves the outcome of depression and some studies have even suggested that this can have an impact on suicide rates. However the Hampshire Depression Project is the first study to be carried out using a parallel control group. 156 general practitioners from sixty practices, together with non medical primary care staff have been randomised into two groups. Group A has completed an educational programme based on clinical guidelines derived from the Defeat Depression campaign. The educational intervention was designed by medical educationalists to maximise its impact. Follow-up education

into individual practices was carried out for the full year of the study. Group B (control group) will be educated in the second year.

The range of outcome variables being assessed include general practitioner's identification index, patient's outcome for depression, prescription of antidepressants, referrals to secondary care, suicide rates, and the cost effectiveness of the intervention. Methodological and practical issues will be presented.

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## S27. The brain imaging of psychopathology

*Chairmen:* S Hirsch, L De Lisi

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### SIMILARITIES AND DIFFERENCES BETWEEN SCHIZOPHRENIA AND AFFECTIVE DISORDERS

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Functional brain imaging techniques can be broadly divided into two categories: "brain mapping" procedures which measure regional cerebral blood flow or metabolism as an index of neural activity and radioligand studies which may be used to obtain measures of enzyme / receptor activity, density or affinity and possibly fluxes in endogenous neurotransmitters. To date only brain mapping techniques have been used extensively in the study of the neurophysiological correlates of psychopathology. Brain mapping studies in psychiatric patients have most commonly been used with a cross-sectional design to identify changes in the pattern of brain activity in patient groups in comparison with an appropriate control group. Patients have been scanned in an "activated" state while performing a task designed to highlight specific aspects of their psychopathology, or at "rest", in which case persistent symptomatology (such as depressed mood or hallucinations) is considered the activating state. In other studies the neurophysiological variable (e.g. regional cerebral blood flow) is correlated with a relevant measure of psychopathology within the patient group. These techniques have been used extensively in schizophrenia and to a lesser degree in patients with affective disorders. They have established with increasing reproducibility that distributed abnormalities of brain function occur in the major psychiatric disorders, with some relationship to symptom or syndrome profiles. Indeed there is some evidence that the overlap in results from cross-sectional studies in schizophrenia, depression and other affective disorders is due to the presence of common symptoms across diagnosis. The longitudinal comparison of patients before and after recovery is a conceptually simple but underused method of examining the relationship between cerebral dysfunction and psychopathology. Such studies have shown that lateral prefrontal cortical function in depression normalises with clinical recovery. The challenge for functional imaging is now to further probe these identified dysfunctions with more refined methods that have greater sensitivity and which may ultimately be able to define the relationship between a particular pattern of abnormal brain function, specific psychopathology and a biochemical mechanism. The progress that has been made in this endeavour and future strategies will be presented with particular reference to "brain mapping" activation studies in schizophrenia and depression and developments in radioligand studies.

### FUNCTIONAL BRAIN IMAGING OF NEGATIVE SYMPTOMS OF SCHIZOPHRENIA

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Negative schizophrenic symptoms are poorly responsive to neuroleptic medication, and may be heterogeneous, since it is difficult to discriminate primary, enduring negative symptoms from those secondary to long-term neuroleptic treatment, depression, or institutionalisation. It has been hypothesized that they may be related to a deficient dopaminergic transmission, to a functional hypofrontality, or to structural abnormalities.

First, we studied negative symptoms and dopaminergic variables. In order to investigate the links between dopamine D2 (postsynaptic) receptors and primary negative symptoms, young, drug-free negative schizophrenics were selected. The measure of the striatal D2 receptors assessed by positron tomography (PET) correlated negatively to the score of a dimension of psychomotor poverty, involving the core negative symptoms alogia and blunting of affects [1].

At the presynaptic level, the dopaminergic function was studied with PET and 18F-FluoroDOPA, using the Patlak method in 6 non-neuroleptized schizophrenics and controls. The variance of the 18F-Dopa uptake constant Ki was significantly increased in patients: the 18F-Dopa uptake constant Ki was markedly increased in some, but not all, schizophrenics, and decreased in catatonia.

Second, the links between the negative symptoms and the cerebral regional activation abilities are currently studied using the H<sub>2</sub><sup>15</sup>O method, measuring the regional cerebral blood flow changes through lexical evocation tasks. In negative patients, preliminary results suggest a hypofrontality in the resting state, and preservation of the capacity to activate some frontal regions during the tasks, although with a somehow different pattern of regional activation than in controls.

[1] Br J Psychiatry 1994 164, 27-34.

### FUNCTIONAL NEUROANATOMY OF VERBAL SELF-MONITORING

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*Background:* Cognitive psychological models and functional neuroimaging data suggest that auditory verbal hallucinations may result from the disordered monitoring of inner speech. However, the brain regions involved in normal verbal monitoring are unknown. We sought to identify them by examining the neural response to alterations in auditory verbal feedback during reading aloud, so that the speech that was perceived sounded different to the speech that was articulated.

*Methods:* Regional cerebral blood flow was measured with positron emission tomography and H<sub>2</sub><sup>15</sup>O while 6 dextral male controls articulated single words, presented at 2s intervals on a VDU. Each subject had 12 scans. The baseline task involved reading aloud and hearing one's own speech. Verbal monitoring was engaged in two conditions. In the first, the pitch of the subject's speech was elevated by 8 semitones with an acoustic effects unit. In the second, their speech was substituted with that of an investigator, who articulated the words in synchrony with the subject. The tasks were matched for volume of auditory input, and were presented in a counterbalanced order. Data were analysed with Statistical Parametric Mapping.