be considered. Sometimes the family of the OCD patient plays an important role in maintaining the obsessive-compulsive symptoms and unless a broader approach (i.e. family approach) is applied, patients may continue to be resistant. The role of cognitive behavior therapy alone or in combination with each of these approaches is of great importance as well in these severe cases. For very severe resistant patients who do not respond to any treatment, neurosurgery may be beneficial. In the treatment of resistant cases it is important to maintain the patient's hope along with a step-by-step logical approach. This is especially true in a field that is progressing as rapidly as OCD.

S44. The economics of mental health care

Chairman: M Knapp

Abstracts not received

S45. The new generation of antipsychotics: considerations and challenges

Chairmen: T Barnes, A Altamura

MOVEMENT DISORDERS IN SCHIZOPHRENIA AND IMPLICATIONS FOR THE USE OF NEWER ANTIPSYCHOTICS

Thomas R.E. Barnes. *Department of Psychiatry, Charing Cross and Westminster Medical School, St. Dunstan's Road, London W6 8RP, UK*

Clinical studies of the newer antipsychotic drugs, such as clozapine and risperidone, have consistently shown a lower liability for extrapyramidal symptoms (EPS). However, the interpretation of data from controlled, comparative studies of new and conventional antipsychotics may be confounded by the issue of dosage differences, and perhaps dosage frequency. The potential lack of equivalence between the doses of the two drugs may partly explain any observed differences in side-effects. However, the development of EPS may not be simply a function of dosage. For example, while chronic akathisia may be associated with younger age and higher antipsychotic dosage, the likelihood of developing acute akathisia may be greater if high-potency antipsychotics are administered in rapidly-increasing dosage. Thus, for the newer drugs, the prescribing recommendation for a gradual introduction should mitigate against the development of acute akathisia. Similarly, for tardive dyskinesia, while the outcome may partly depend on dosage, the proportion of time that antipsychotic medication is received may be an important variable, that is, intermittent treatment may be associated with a poorer outcome than continuous treatment.

The evidence that patients developing EPS may be at greater risk of developing tardive dyskinesia, raises the possibility that the newer antipsychotics will be associated with a lower incidence of tardive dyskinesia over time. However, longer-term studies will be required to test whether maintenance treatment with new and conventional drugs at optimum doses reveals any clinically-significant differences in the incidence of this problem. Nevertheless, there are reports that clozapine may reduce the severity of tardive dyskinesia and tardive dystonia in patients that have developed these conditions while receiving conventional drugs.

DOPAMINE AND SEROTONIN RECEPTOR OCCUPANCY IN PATIENTS TREATED WITH ANTIPSYCHOTICS

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Using positron emission tomography (PET) and [11C] raclopride the mechanism of action of antipsychotic drugs was examined in schizophrenic patients treated with classical and atypical antipsychotics respectively. Regarding the *classical* antipsychotics, the dopamine hypothesis was supported by 1) the consistent finding of a high D2 receptor occupancy in patients responding to treatment with classical antipsychotics (70–90%) and 2) the finding of a statistically significant relationship between the degree of D2 receptor occupancy and antipsychotic effect in a controlled double blind study of patients treated with raclopride.

In patients treated with the *atypical* antipsychotic drug clozapine the D2 receptor occupancy was significantly lower (20–67%). It has been suggested that the atypical effects of clozapine are related to a combined effect on D2- and 5-HT2 receptors. In 5 clozapine treated patients (125–400 mg/day) examined with PET and [11C]*N*-methylspiperone ([11C] NMSP) a very high 5-HT2 receptor occupancy (84–94%) was a consistent finding. Although substantial 5-HT2 receptor occupancy has been found also during treatment with thioridazine, the combination with a relatively low D2 receptor occupancy is so far unique for clozapine.

In the new generation of antipsychotic drugs most have affinity *in vitro* both for D2 dopamine and 5-HT2 receptors. Preliminary data from four patients treated with risperidone indicates a D2 receptor occupancy of 75–80% and an even higher 5-HT2 receptor occupancy. In a study of three healthy controls given a single oral dose of 10 mg olanzapine the D2 receptor occupancy was 59–63% after 7 hours and the 5-HT2 receptor occupancy was 74–92% after 9.5 hours. The D2 and 5-HT2 receptor occupancy induced by clinical treatment with olanzapine in low doses may be similar to that of clozapine. Despite these observations the clinical significance of 5-HT2 receptor occupancy needs to be further clarified.

OLANZAPINE VERSUS HALOPERIDOL: RESULTS OF THE MULTI-CENTER INTERNATIONAL TRIAL

Douglas J. Williamson [1], Charles M. Beasley [2], Pierre V. Tran [2], Roy N. Tamura [2], Todd M. Sanger [2], Gary D. Tollefson [2]. [1] *Lilly Industries Ltd, Dextra Court, Chapel Hill, Basingstoke, RG21 5SY, UK;* [2] *Olanzapine Development Team, Lilly Research Laboratories, Indianapolis, IN 46285, UK*

This international, multicenter, double-blind, parallel trial compared the efficacy and safety of a single dose range of olanzapine, 5–20 mg/day, to a single dose range of haloperidol, 5–20 mg/day, in the treatment of 1,996 in- and out-patients with a DSM-III-R diagnosis of schizophrenia (83.1%), schizophreniform disorder (1.9%), or schizoaffective disorder (15.0%). Patients were assigned by random allocation to double-blind therapy in the ratio of 2 olanzapine to 1 haloperidol. The acute phase of the trial was 6 weeks in length which was followed by a double-blind extension. Patients who remained in double-blind treatment at least 3 weeks but were not showing

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improvement could be transferred to open-label olanzapine at weeks 4, 5, or 6 without unblinding their double-blind treatment.

To enter the trial, patients were either symptomatic ($BPRS_{0-6} \geq 18$), with or without current therapy; or were intolerant of current therapy (other than haloperidol), with or without symptoms. 98.1% of patients with baseline and post-randomization BPRS scores began with baseline $BPRS_{0-6} \geq 18$.

A statistically significantly ($p < 0.001$) greater proportion of the 1,336 patients assigned to olanzapine (66.4%) than of the 660 patients assigned to haloperidol (46.8%) completed the acute phase of this trial. The proportions of patients discontinuing for lack of efficacy (LOE) and adverse events (ADE) were also statistically significantly smaller with olanzapine (LOE: 20.7% vs. 32.1%; ADE: 4.5% vs. 7.3%).

On the primary analysis of overall efficacy, the difference in baseline to endpoint (LOCF) mean change on the BPRS, olanzapine was statistically significantly superior to haloperidol (-10.89, -7.93; $p = 0.015$). Mean change on CGI-S and response rate (> 40% improvement on BPRS with 3 or more weeks treatment) also significantly favored olanzapine as did improvement on BPRS-negative and PANSS-negative. Positive symptom improvement was comparable.

There was statistically significantly less treatment emergent dystonia, parkinsonism, and akathisia with olanzapine than with haloperidol. Scores on the Simpson Angus, Barnes, and AIMS decreased for olanzapine treated patients and mean changes on these scales were all statistically significantly different from the changes observed with haloperidol.

The efficacy and safety data from this large multi-center trial will be reviewed in greater detail.

S46. Suicide prevention strategies across Europe

Chairmen: R Jenkins, D de Leo

SWEDEN'S SUICIDE PREVENTION STRATEGY

J. Beskow. *National Centre for Suicide Research and Prevention, National Institute for Psychosocial Factors and Health, Karolinska Institute, Box 230, S-171 77 Stockholm, Sweden*

Goal. A National Programme for Suicide Prevention was published in September 1995. One of the goals should be a persistent decrease of the number of suicides and suicide attempts in Sweden.

Strategies. Interventions must be based on scientific knowledge, with respect to the cultural situation in Sweden concerning suicide. It includes raising consciousness about suicidal problems; supporting social and medical treatment; meeting the needs of different risk groups, especially children and youth; decreasing the availability of suicidal means and increasing the national competence in suicidology.

Implementation is now going on including better registration of suicidal acts, stimulating local projects as well as promoting evaluation.

ENGLAND'S SUICIDE PREVENTION STRATEGY

Rachel Jenkins, David Kingdon.

Goal: England's Health of the Nation Strategy which includes targets for suicide prevention was published in 1992. One of the goals is to reduce suicides in the general population and the other was to reduce suicides in people with Severe Mental Illness.

Strategy: The Strategy to achieve these goals is multifactorial based on scientific evidence. It includes educating health and social care professionals about assessment and management of depression and suicidal risk, supporting high risk groups, educating the media, reducing the availability of suicidal means, improving services to people with Severe Mental Illnesses and auditing previous suicides to learn the lessons for prevention.

Since 1992 England's rate of suicide in the general population has now fallen.

THE NORWEGIAN PROGRAM FOR SUICIDE PREVENTION

N. Retterstøl. *University of Oslo, Gaustad Hospital, Gaustad, 0320 Oslo, Norway*

The Norwegian national program for suicide prevention has been running since 1993, drawn up by the Ministry of Health. A coordinator group in the Ministry of Health is in charge of the program with a project leader and a broad reference group consisting of psychiatrists, psychologists, nurse, sociologist and representatives from other professions. Plans are made, and programs running for the prevention on: 1. Community level. 2. Regional level. 3. National level.

Regional centres are established in the four university regions of the country and a national centre is established in Oslo, attached to the Oslo University Unit at Gaustad Hospital. Three, hopefully six full time academic positions are under establishment. The program has now been running for 3 years, and several educational programs for health professionals have been given in all 18 counties of the country. Further details will be given in the oral presentation.

SUICIDE RATES OF THE ELDERLY IN EASTERN EUROPE

Norman Sartorius. *Department of Psychiatry, University of Geneva, 16–18, Bd de St. Georges, 1205 Geneva, Switzerland*

Suicide rates of the elderly in Eastern Europe have decreased in the recent past. This may be seen as a surprising finding in view of the hardships which citizen from Eastern and Central European countries experience.

The presentation will include a summary of recent findings in this respect and present several possible explanations for these findings.

S47. Post-traumatic stress disorder

Chairmen: I Marks, B Raphael

Abstracts not received

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