

Method: A questionnaire including the SCL-25 was applied to patients ($n = 191$) consecutively consulting their family physician in a catchment area - a part of the City of Aarhus, Denmark. All patients with a high SCL-25 score ($n = 44$) and a random sample of the low score patients ($n = 55$) were interviewed by means of SCAN (Schedules for Clinical Assessment in Neuropsychiatry). Further, the Whiteley Index for Hypochondriasis was applied.

Results: The SCAN interview showed that 60.6% of the 99 interviewed patients had at least one medically unexplained physical symptom and 24.2% fulfilled the diagnostic criteria for a ICD-10 somatoform disorder and 59.9% for a DSM-IV somatoform disorder, and 30.3% if excluding the DSM-IV Not Otherwise Specified (NOS) diagnostic group. Using ICD-10 criteria the prevalence of somatoform disorders among all the 191 screened patients was calculated to 22.3% (CI-95%: 16.4–28.1) and 57.5% (CI-95%: 50.5–64.5) using DSM-IV criteria and 30.3% (CI-95%: 23.8–36.9) excluding the NOS group. The internal and external validity of the Whiteley Index were tested by latent structure analysis and ROC analysis, and a short 7-item version of the index including two subscales was developed. At a cut point of zero/one, the Whiteley-7 Scale detected all ICD-10 somatoform disorders and 71% of DSM-IV somatoform disorders

The GP's recognized about half of the patients with a somatoform disorder according to the SCAN interview. The GPs' ability to recognize other mental disorders was not significantly influenced by the presence of a somatoform disorder.

Patients with somatoform disorders used more non-psychiatric health care facilities than other patients ($p = 0.01$).

Conclusions: Somatization is very prevalent in primary care but frequently not recognized by the GP. The somatizing patients use more health resources than other patients. The Whiteley-7 questionnaire may be helpful for aided recognition.

S64-3

PSYCHIATRIC MORBIDITY IN A MEDICAL DEPARTMENT

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Objectives: To determine the prevalence and character of mental illness and symptoms in an internal medical department, and the association with the type and degree of somatic illness, length of stay, and complexity of care.

Material and Methods: Two hundred and ninety-four consecutive internal medical patients were interviewed the day after admission, at discharge, and by follow-up. A two-step design was employed for the investigation, using ARSI, a special interview form developed in connection with the Biomed1 Risk Factor Study in the frame of ECLW (European Consultation Liaison Workgroup), for screening, and SCAN (*Schedules for Clinical Assessment in Neuropsychiatry*) for case interviews.

By means of interviews with the patients and the medical and nursing staff, and from medical records, additional information was obtained on sociodemographic data, discharge diagnoses, health perception, compliance, health care utilisation, social support, somatic illness, and on the complexity of care, the concept of which is also developed within the Biomed1 Risk Factor Study.

Results: Preliminary results concerning the prevalence of mental illness in general, and of specific psychiatric diagnoses, will be presented. Comparisons regarding sociodemographics, somatic illness, length of stay, and complexity of care, will be made between the diseased group and the group identified as symptom-free.

S64-4

SCREENING FOR SOMATOFORM DISORDER IN MEDICAL OUTPATIENT CLINICS

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Objective: to test the ability of a screening questionnaire ("SQUASH"), completed by physicians, to predict the presence of somatoform disorder and other psychiatric disorder, clinical outcome, functional status, and healthcare costs in consecutive new patients attending medical outpatient clinics.

Design: Analysis of sensitivity, specificity and positive and negative predictive value of screening instrument compared with "gold standard" interview and outcome measures.

Main Outcome Measures: Screening instrument to identify somatoform disorder. Investigator-based research diagnostic psychiatric interview (SCAN/ICD-10). Functional status (SF-36). Healthcare utilization and costs.

Results: 344 eligible patients attended during the period of study. 249 subjects completed an interview (72%). 66% had clear-cut physical disease sufficient to explain their symptoms, whilst 34% had symptoms not explained fully by disease; 22% received a diagnosis of irritable bowel syndrome. 16% met criteria for a current depressive or anxiety disorder; 22% met criteria for somatoform disorder. Psychiatric disorder was much more common in patients with unexplained symptoms (83%) than in patients with clear-cut physical disease (20%).

The screening instrument was acceptable to and completed satisfactorily by the clinic physicians. Analysis of somatoform disorder prediction revealed that one questionnaire item, the physician's impression of the cause of the symptoms, correctly identified 85% of patients (sensitivity 62%, specificity 92%).

Discussion: The study confirms that medically unexplained physical symptoms are common in this setting, and are strongly associated with psychiatric disorder. The screening instrument enables physicians to identify somatoform disorder patients with a high degree of accuracy, although it requires further evaluation and development.

S64-5

PATIENTS PRESENTING TO CARDIOLOGISTS WITH THE COMPLAINT OF PALPITATIONS

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The symptom of palpitations is one of the commonest reasons for referral to cardiologists. We have conducted a study of 200 consecutive referrals from primary care to cardiologists providing a district service. Patients attended a research assessment 2–3 weeks before the clinic visit at which they completed questionnaires, were interviewed and underwent an assessment of heart rate. The cardiologist's assessment was coded and all patients were sent a postal questionnaire at three months. Eighty subjects with benign palpitations were recruited to a randomised controlled trial of a brief cognitive behavioural treatment-based intervention by a cardiac nurse and assessed in terms of symptomatic, psychological and quality of life outcome.

- Only 34% of subjects had evidence of medically significant arrhythmias, the others were assessed as being either abnormally aware of sinus tachycardia (23%) or of abnormalities of rhythm (such as extra beats) within normal limits (43%). Psychiatric disorder occurred in a minority of subjects and was most frequent in the sinus rhythm group (panic attacks 48%; panic

disorder 15%). Patients with arrhythmia were much more likely to accurately perceive their heartbeats than the other groups and the controls. Fear of bodily sensations was significantly higher in the sinus rhythm group and all three groups were significantly more worried about palpitations and about heart disease and illness than controls.

- The intervention was popular with patients who said that they found the explanation and advice helpful. Whilst for a number of patients in the control group outcome improved, significantly more treated patients had better outcomes in terms of frequency of palpitations, their distress and other reactions to them and in limitation of everyday life.

Conclusion: Psychiatric disorder and health anxiety were particularly common in the sinus rhythm group. All three groups described significant distress and limitation of everyday activities, often of long duration. A simple nurse-delivered intervention was effective.

S64-6

MIGRAINE AND PSYCHIATRIC DISORDERS. A POPULATION AND REGISTER BASED INVESTIGATION

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The literature reports that migraine and depression are associated disorders. Such an association is interesting from an aetiological, psychodynamic, genetic epidemiological and health-care cost point of view.

We investigated the association of migraine and depression in a population-based sample of 484 migraineurs. The participants received a diagnosis by a physician according to the International Headache Society criteria and data on their psychiatric morbidity was drawn from the Danish Psychiatric Case Register. Drop-out analysis was performed. The data showed that migraineurs were not more prone to hospitalisation due to depression than people who never had migraine.

FC65. Biological psychiatry – basic research

Chairs: H D'Haenen (B), H Aschauer (A)

FC65-1

ACTION AS A DETERMINANT IN STIMULUS PROCESSING AS ASSESSED BY THE CONDITIONED TASTE AVERSION PARADIGM IN RATS

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It has long been recognised that patients suffering from schizophrenia tend to have difficulties to take information from their environment in an "active" way. Surprisingly, this problem has received little attention. Thus, we have developed a rodent model allowing us to document the role of the action related to stimulus processing for its subsequent integration.

For this purpose, we used the conditioned taste aversion paradigm in rats. This paradigm consists in pairing the consumption of a flavoured solution -the target stimulus being the taste- with a

gastric malaise induced by a systemic injection of lithium chloride. Taste processing is assessed by the ensuing null or weak consumption of the flavoured solution by the animal. This procedure can be achieved either "actively", -which requires from the rat the development of a self-generated activity to take the flavoured solution from a drinking tube-, or "passively", - which *does not* require such an activity, the flavoured solution being perfused intraorally-. The difference between these two procedures relies on the presence or not of an activity related to the consumption of the taste stimulus at the time of learning. We found an improved performance for the active condition, as opposed to the passive one. This suggests that the cognitive processing of the stimulus is modulated at least, by the presence of a related self-generated action.

We will present recent data from our laboratory aimed at documenting the psychological and pharmacological sensitivity of our model.

FC65-2

INDICATORS OF CHRONIC IMMUNE ACTIVATION IN SCHIZOPHRENIA

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It has been hypothesized that schizophrenia may be accompanied by an acute phase response (apr).

Serum concentrations of interleukin-6 (IL-6), soluble interleukin-6 receptor (sIL-6R), soluble interleukin-2 receptor (sIL-2R), interleukin-1 receptor antagonist (IL-1RA) and Clara cell protein (CC 16) as well as concentration of acute phase proteins: C-reactive protein (CRP), α -1-acid glycoprotein (AGP), haptoglobin (Hp) and AGP microheterogeneity were measured in 35 schizophrenic patients during exacerbation of their symptoms and in 20 healthy controls subjects. Patients studied were hospitalized at the Department of Adult Psychiatry in Poznan. Diagnoses were made according to DSM-IV criteria. There were 20 schizophrenics of paranoid type and 15 of residual type. There were no patients suffering from the first schizophrenic episode. All subjects were medically healthy. Measurements of cytokines were performed in Eurogenetics. Schizophrenic patients showed significantly higher serum concentrations of IL-6, sIL-6R, sIL-2R, IL-1RA, as well as AGP and Hp and significantly lower concentrations of CC 16 and lower values of glycosylation profiles of AGP than healthy controls.

The results obtained in this study confirm recent findings suggesting that schizophrenia is accompanied by immune activation of chronic type.

FC65-3

ARE THE STRUCTURAL BRAIN ABNORMALITIES IN SCHIZOPHRENIA MEDIATED BY PREGNANCY AND BIRTH COMPLICATIONS?

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Background: A range of structural brain abnormalities have been reported in schizophrenia. Their origin is unclear but may be linked to the increased rate of pregnancy and birth complications (PBCs), particularly low birth weight, reported in schizophrenic patients. The purpose of the present study was to measure whole brain, cerebral grey matter, total ventricular and corpus callosum (CC)