Results: The self-harming group were distinguished from the remainder on a number of measures. For instance, the self-harmers had more dissociative experiences ($F = 4.581$, $p = 0.04$), more physical neglect in childhood ($F = 6.09$, $p - 0.022$) and to have more suicidal ideation ($F = 10.683$, $p = 0.003$), hopelessness ($F = 5.804$, $p = 0.022$), and more inwardly directed anger ($F = 4.546$, $p = 0.04$).

Conclusion: These empirical data provide some evidence as to reasons why women who self-harm respond to adversity in a maladaptive manner and the ways in which such women process emotionally-laden material. These data also have implications for designing an intervention to reduce this maladaptive behaviour.

MAGNETIC RESONANCE TOMOGRAPHY OF THE BRAIN IN 21 SEX OFFENDERS

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21 male sex offenders admitted to prison have been investigated consecutively by magnetic resonance tomography (MRI). Patients were divided into 2 groups. Patients of group I ($n = 12$) had committed at least one aggressive sexual offense with vaginal or anal penetration by directly injuring severely the victim. Patients of group II ($n = 9$) had been sentenced for either having performed forced sex without directly injuring their victims, or they had tried to commit rape but had withdrawed because of the victim's resistance, or they had committed a non-violent pedophile or exhibitionistic offense. 9 patients of group I (75%), but only 2 patients of group II (18%) showed structural brain abnormalities according to blindly rated magnetic resonance scan reports. Groups did not differ significantly in age or general intellectual functioning. Different types of abnormalities were found: right ventricular enlargement, dilated right temporal horn, cortical atrophy and deep white matter lesion.

Furthermore, MRI abnormalities were correlated with clinical diagnoses according to DSM-III-R axis I and II, and with variables of official criminal records. Results suggest an association between structural brain abnormalities as detected by magnetic resonance tomography and the extent of physical violence in sexual offenses, exhibiting rather a symptom of general violence and sadistic and antisocial personality than of paraphilia.

THE INSANITY DEFENCE IN IRELAND: A STUDY OF GUILTY BUT INSANE PATIENTS 1850–1995

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Background: In common-law jurisdictions, the insanity defence has been governed by the M.Naghten rules since 1843. Very little research has been published on the application of the insanity defence in the U.K. of Ireland. This is a retrospective descriptive study of a complete sample of insanity defence cases in Ireland between 1850 and 1995.

Methods: Case records and legal files were examined for 436 acquittees in all. Socio-demographic, forensic and clinical data are described.

Results: The number of insanity acquittees has fallen five-fold since the nineteenth century. Acquittees were commonly single males from rural areas, aged in the mid-thirties who had been charged with violent crime. The majority had a major psychiatric illness. Female insanity acquittees were relatively few in number and were as likely as males to have been charged with violent crime, especially directed towards their own children. The average length of stay in hospital has decreased significantly since the nineteenth century to mean of 8.7 years.

Conclusion: The insanity defence is rarely used in Ireland and is largely confined to serious offenses, especially homicide. Acquittal continues to result in prolonged detention at the Central Mental Hospital.

DEPRIVATION OF LIBERTY IN PSYCHIATRIC TREATMENT

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In a Finnish university psychiatric clinic, 101 inpatient treatment periods of 99 18–65 years old patients (one month admission sample) were followed until discharge or up to 150 days to study deprivation of liberty in psychiatric treatment. 44% of the patients were female, 21% were admitted for the first time, and 55% were diagnosed as suffering from psychotic disorders according to DSM-III-R. 32% of the patients had been involved with the civil commitment procedures, experiencing involuntary admission, observation period for assessing the mental health status, or involuntary detainment. Involvement with involuntary procedures was more common among psychotic patients (45%) than among non-psychotic patients (16%). Independently of the civil commitment procedures, 36% of the patients had been deprived of their liberty during the treatment period experiencing seclusion, physical restraint or denial of leaving the ward, for the most those whose legal status was involuntary (66%) but also patients treated voluntarily (22%). The figures are high and probably due to a paternalistic tradition in Finnish psychiatry.

CRITERION-BASED AUDIT OF EPILEPSY IN BOTH COMMUNITY AND HOSPITAL SETTINGS IN SEVEN DISTRICTS

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Background: Approximately 2% of the general population will have developed epilepsy before the age of 40 but in patients with a learning disability, the prevalence is up to 40%. There have been few previous audits on epilepsy in learning disability. A Portsmouth study examined the medical management of 75 patients with epilepsy but this was an institutionalised sample. An American survey of 100 learning disabled patients was more relevant in that it was a community-based survey. Neither of these publications set standards of care beforehand and so were surveys rather than audits.

Standard	Result
1. Each patient should have an annual review by a psychiatrist	88%
2. Each patient should have an ICD diagnosis recorded in the notes	40%
3. Seizures should be described and recorded in the medical notes	83%
4. The evidence on which the diagnosis was made should be adequate	99%
5. The patient or main carer should know which doctor is responsible for epilepsy management	100%
6. Overall, 80% of patients should be on monotherapy	50%
7. Patients should not be receiving medication if they have not had a seizure within the past 2 years unless there has been a specific decision to continue antiepileptic drugs	31% had no specific review
8. 80% should be free from drug side-effects	89%
9. Patients should have medications provided if they are at risk of status	60%
10. Written instructions for the use of drugs in status should be provided	84%

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Objectives: To audit the management of epilepsy in both institutionalised and community patients with a learning disability.

Design and setting: Psychiatrists from 7 districts agreed on 10 standards of care (*vide infra*). During 1994, each district collected data on the management of 25 patients with epilepsy using an agreed proforma.

Patients: Both institutionalised and community patients with epilepsy were included. results: Data on 175 patients were returned to the Four Counties Clinical Audit Team for analysis. Fifty-one percent were males and 49% were females; mean age was 33 years. 56% were outpatients and 46% were institutionalised patients.

Conclusions: This is one of the first inter-district audits of epilepsy in patients with a learning disability to include both inpatients and community patients and to set standards beforehand. There was some variation in different districts. A majority of patients were seen at least annually. However, only 505 of patients were on monotherapy. Although 89% were free from side-effects (2 districts had all patients from side-effects), this could mean that patients were not fully examined for adverse drug reactions.

Acknowledgements: We thank all the clinicians in 7 districts who co-operated in this audit.

PSYCHOPATHOLOGICAL STATES OF PARAPHILIC BEHAVIOUR

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Objective. Discovery of psychopathological and clinicopathogenetic consistent patterns of paraphilia. *Methods.* Subjects comprise 370 males referred to the forensic psychiatric examination after they were prosecuted for sexual crimes. 193 of them were persons with different variants of paraphilia (ICD-10). The comprehensive statistic analysis of EEG and activity of serotonin and catecholamine was performed. *Results.* Identified were three groups of psychopathological disorders: (1) psychopathological formations reflecting disontogenetic disturbances of the stageness of self-consciousness forming; (2) foregoing accomplishments of altered emotionality status reflecting a shift to the direction of protopathic sensitivity with a wide spectrum of affective disorders; (3) states of perverted consciousness in different variants from the narrowing and dissociative reactions to the clouding — emerging directly at the moment of accomplishment. Presented are findings about the relation of the given states with the alteration of biological parameters. *Conclusion.* The system of diagnostic and expert criteria of paraphilias, based on their interaction with other psychopathological syndromocomplexes, is given.

LOWER FREQUENCY OF APOE E ALLELE IN AN OLDER DOWN'S SYNDROME POPULATION

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Several studies have reported an association of the Apolipoprotein E allele e4 with Alzheimer's disease. Individuals with Down's syndrome (DS) are known to have an increased risk of Alzheimer's disease. We are engaged in a prospective study on the effect of APOE genotype on the development and progression of dementia in Down's syndrome.

We determined the APOE genotype of 77 DS individuals whose average age was 48. 12 of these individuals were demented using DSM111R criteria. APOE genotype was determined as described by Crook [1]. The table summarises our results for this group and compares the allele frequencies with the frequencies in a sample of 182 population controls. The frequency of the E4 allele in the DS individuals (0.084) was less than half that in the controls (0.192) (Chi square 9.36, 1 df, p = 0.0022).

We found no E4 homozygotes in the DS group whereas we would have expected between two and three. Schacter et al [2] have found a lower frequency of the APOE e4 allele in a study in French centenarians, which they attributed to its role as a risk factor in heart disease and Alzheimer's disease. We propose that the decreased frequency of Apoe e4 allele in DS may be due to the premature death of those DS individuals with this allele from either heart disease or dementia. This effect may be seen much earlier in DS perhaps due to the overexpression of the APP gene on Chromosome 21.

Allele number and frequency	E2	E3	E4
DS n = 77	12 (7.8)	129 (83.8)	13 (8.4)
Controls n = 182	20 (5.5)	274 (75.3)	70 (19.2)

[1] 1 Crook R, Hardy J, Duff K. Journal of Neuroscience methods 1994; 53: 125–127

[2] 2 Schacter F, Delanef-Faire L, Guenot F et al. Nature Genetics 1994; 6: 29–32

NR13. Schizophrenia: aetiology and antipsychotic drugs

Chairmen: G Bussato, D Castle

AN INVESTIGATION INTO EXTRAPYRAMIDAL SIDE EFFECTS INDUCED BY NEUROLEPTICS AND THEIR RELATIONSHIP TO CREATINE PHOSPHOKINASE

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Aim: To assess the relationship between the severity of muscular symptoms induced by neuroleptics and serum creatine phosphokinase concentration (CPK). The recent speculation about a spectrum concept of neuroleptic malignant syndrome (NMS) and debate about the importance of CPK in the diagnosis of NMS inspired this prospective study.

Method: 35 subjects were recruited and rated on 3 separate occasions for the severity of their extrapyramidal side effects (using standardised rating scales) with concurrent CPK levels being estimated.

Results: No statistically significant association was found between CPK levels and severity of extrapyramidal side effects.

Conclusion: Although this study has not shown a positive relationship between CPK levels and extrapyramidal side effects published case reports suggesting an association between these factors cannot be ignored and a larger study may be indicated. Published evidence is cited for the asymptomatic rise of CPK and other factors which cause a rise in this enzyme. The case is made for more caution to be exercised in the use of CPK as a clinical indicator in the rechallenging of patients who have suffered from an episode of neuroleptic malignant syndrome (NMS).

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