

## Psychopathology and violent behaviour in psychiatric intensive care\*

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### *Background of the study*

This study considered the use of staff observation and patient's self-ratings of subjective psychopathology on admission to a psychiatric intensive care unit. The aim was to evaluate these measures as a means of predicting subsequent assaults and self-injury during the patients' stay on the ward. Few studies have shown a relationship between subjective experience and observable violent behaviour although some have found a correlation with 'violence potential'. Eichelman & Hartwig (1990) have suggested the use of the SCL-90 hostility subscale, although doubts have been expressed about the ability of psychotic patients to complete such questionnaires reliably. The usefulness of both patients' self-ratings and staff observation would lie in their ability to help staff predict violence and self-injury and to take appropriate action.

### *The study*

Withington Hospital has a catchment population of approximately 200,000, with 165 adult beds including a 12-bedded psychiatric intensive care unit. In the year of study 1,560 general adult admissions occurred. Ninety-two patients were transferred from their home ward to the intensive care ward and one patient was admitted directly from the community.

A prospective design was used with potential predictors of violence being measured at admission and at discharge to monitor change. Appropriateness of referral was judged by the non-medical multidisciplinary team based on four general criteria. These were: violence and assault on others; risk of self-injury and suicide; need for a restricted environment due to marked wandering or impulsivity and a 'special need' category (contained environment for behavioural programmes). Appropriateness was rated as 'low' or 'moderate-high'. Staff also

completed an observational rating scale (Rajotte *et al*, 1967) measuring disruptive behaviour and an SCL-90 was rated by patients at admission and discharge. All incidents of violence and self-injury were recorded and treatments received during the patients' stay on the unit were noted.

### *Findings*

During the study year, of the 93 patients admitted, 53 were women and 40 men. The mean age was 32.5 years and the average length of stay was 25 days (range 1 to 365 days). The most common diagnosis was of major affective disorder (41 cases) with 21 manic, 13 depressive and seven puerperal affective disorders. Twenty-two had a schizophrenic or paranoid psychosis, eight a toxic/organic syndrome and 11 a personality or addictive disorder. Sixty patients were detained under the Mental Health Act (1983). The principal psychiatric treatment was neuroleptic medication (67%) with only small quantities of other drugs or electroplexy being used.

Violent incidents were recorded as internally directed (self-injury) or externally directed (assaults against others or property). Ten patients (11%) committed 15 self-injuries while 23 (25%) assaulted others or property (a total of 93 incidents). In total, 32 patients (34%) initiated at least one violent incident (108 incidents in the year). In a prospective design, demographic factors, psychometric measures, and staff appraisal on admission were used to predict self-injury, assaults or violent incidents in general.

The SCL-90 scores did not predict the likelihood of either self-injury or assault. However, there were a number of positive findings. The admission Rajotte score predicted subsequent assaults (high scores) and self-injury (low scores). Both showed significant differences from the remaining patients ( $P < 0.05$ ). Cut-off scores were  $> 46$  (correctly classifying 69% of patients who assaulted) and  $< 28$  (classifying 70% of self-injurers). The staff team ratings of appropriateness of admission predicted the patients' involvement in violent incidents overall (self-injuries and assaults;  $P < 0.03$ ).

\*A brief version of this paper was presented at the 150th Annual Meeting of the Royal College of Psychiatrists, Brighton, 1991.

Two prospective measures, the staff rating of appropriateness of admission and Rajotte score, emerged as reliable predictors of violent incidents. What information were the staff using to make their ratings? Admission SCL-90 scores did not in themselves predict aggression but might they be related to the staffs' judgements? Using multiple regression to predict the Rajotte score from specific SCL-90 scales there was a significant effect (0.04). High scores on the Rajotte scale were predicted by low depression scores and by a borderline effect of high hostility scores.

From these results, self-injury would be predicted at admission by low admission Rajotte scores (< 28), high SCL-90 depression self-rating and low SCL-90 hostility scores. The likelihood of external assault would be greater in cases where there was a high admission Rajotte score (>46), low SCL-90 depression rating, and high hostility self rating.

In addition, the low v. high 'appropriateness of admission' groups were compared on the general and specific scales of the admission SCL-90. The high appropriateness group had significantly greater scores at admission on the Global Symptom Index, and on the sub-scales for obsessive-compulsive, depression, anxiety, paranoid ideation and psychotism on admission.

### Comment

The subjective approach to psychopathology worked surprisingly well in this disturbed group of patients (80% SCL-90s completed on admission). Along with the non-medical staffs' 'appropriateness of admission' rating and Rajotte scale, these measures could be used to predict subsequent assaults, self-injury and total violent incidents. Future research could concentrate on the apparently primitive subjective mood dimension of hostility/depression, and on the potential value of the perceptions and views of the non-medical members of the multidisciplinary team in psychiatric intensive care.

### References

- EICHELMAN, B. & HARTWIG, A. (1990) The Carolina nosology of destructive behaviour. *Journal of Neuro-psychiatry and Clinical Neurosciences*, **2**, 288–296.
- RAJOTTE, P., JILEK, W., JILEK, L. *et al* (1967) Antiepileptic and psychotropic properties of carbamazepine. *Union Medical Canada*, **96**, 1200–1206.

*A full list of references and statistical data are available on request to Dr Hyde.*

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## Expert opinion

### Antidepressants and murder\*

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A 44-year-old man was treated with amitriptyline by his general practitioner for 'mild depression'. Shortly after starting treatment he was said to have become 'beserk'; he hit his wife and a family friend with an iron bar and attempted to sever their heads with a kitchen knife. He was found guilty of manslaughter on the grounds of substantially diminished responsibility and sentenced to life imprisonment.

Following the homicidal behaviour 16 amitriptyline tablets were found to be missing and the assailant's blood concentration of the drug was 'higher than expected' (presumably higher than that expected if he

had taken only therapeutic doses). The man appealed against his sentence and an expert medical witness expressed the opinion to the Court of Appeal that the appellant (who had no previous convictions) had experienced a rare side effect of an overdose of amitriptyline and was in a manic state when he carried out the murderous act. His counsel argued that he was no longer a danger to society and should be given his freedom (Dyer, 1991).

As the case is currently *sub judice* further details are not in the public domain and available for comment. It is therefore not possible to offer an opinion on the particular case, but the important theoretical and practical medico-legal aspects that it raises will be discussed.

\*Invited opinion on DYER, C. (1991) Murder on antidepressants. *British Medical Journal*, **303**, 331–332.