

Information on co-morbidity on inpatient admissions

Dear Editor – The HRB would be delighted to include information on co-morbidity on inpatient admissions as suggested by Dixit and Payne (*Ir J Psych Med* 2008, 25(4)). We would be happy to do so were secondary or accompanying diagnoses supplied to us as our forms/systems allow. Unfortunately clinicians seldom if ever return co-morbid diagnostic information; indeed it is at times difficult enough to acquire a principal or preliminary diagnosis. It is understandable that diagnosticians may have difficulty in complex presentations in establishing a definitive diagnosis at or shortly after admission and for this reason the facility for assigning a preliminary diagnosis on admission is provided. Where a preliminary diagnosis is later superseded there is accommodation on the forms for a final discharge diagnosis. The HRB is most anxious to progress information systems in mental health services as recommended in A Vision for Change and is in the process of significant developments in this field in collaboration with HSE and other stakeholders (www.hrb.ie).

We would be delighted to present and review with psychiatrists (consultants and trainees) our activities in this area. Accordingly we would be happy to make presentations to such bodies or groups as are thought relevant - through the Irish Post Graduate Training Committee or the College of Psychiatrists in Ireland. Antoinette Daly, Dermot Walsh, Health Research Board, Dublin 2.

Antoinette Daly

Research Officer
Mental Health Research Unit
Health Research Board
An Bord Taighde Sláinte
Knockmaun House
42-47 Lower Mount Street
Dublin 2, Ireland.

Methadone and its effect on QTc prolongation

Dear Editor – Methadone is a synthetic opioid which has been successfully used in treating heroin addiction and chronic pain syndrome in palliative care for more than 30 years. Methadone maintenance programmes for heroin dependency has shown reduction in mortality and morbidity. It has shown direct reductions in addiction related crime and drug arrests.¹⁻³ Several case reports have highlighted methadone's association with QT prolongation and the risk of Torsades de Pointes, a potentially lethal ventricular tachycardia. Levacetylmethadol, a derivative of methadone was withdrawn from US markets in 2003 due to prolongation of QT interval and an association with Torsades de Pointes.^{4,5}

Methadone delays cardiac repolarisation by blocking the rapid component of 1kr potassium channels, encoded for by human ether a-go-go related gene (hERG) or kCNH2. Methadone is metabolised by isoforms CYP3A4 and to a lesser extent by the isoenzyme CYP 2D6 of the hepatic cytochrome-P450-system. Several risk factors have been

identified as contributing to QT prolongation, including high methadone dose, structural or ischaemic heart disease, family history of sudden cardiac death, hypokalaemia, altered liver function and concurrent use of CYP3A4 inhibitors. Ingestion of cocaine and methadone can also contribute to QT prolongation.^{4,8}

Patients on methadone maintenance programmes are therefore automatically at risk of QT prolongation due to frequency of concomitant medical conditions, cocaine abuse and prescription of additional medications.⁹

Case No 1.

LH is a 29-year-old lady on the methadone maintenance programme for the past 10 years. She has a background history of ongoing heroin and cocaine addiction. She attends the drug treatment centre and is dispensed methadone 110mg daily. In addition, she has multiple medical problems including HIV, hepatitis C, pneumonia, pericarditis and bilateral lower limb ulcers. She requires regular antibiotic treatment and is currently prescribed clarithromycin. She is treated for depression with Sertraline (SSRI). LH presented to Accident and Emergency Department with fainting episodes, dizziness, shortness of breath, facial pallor and pyrexia. Her urine toxicology was positive for heroin, methadone and cocaine.

A 12 lead ECG showed QTc prolongation 540 msec. She was treated successfully for a lower respiratory tract infection. Her methadone dose was gradually reduced from 110mg to 80mg. Her ECG showed reduction of QTc prolongation to 410 msec. She was discharged and referred back to drug treatment services.

Case No 2.

ML is a 28-year-old gentleman on the methadone maintenance programme for the last 8 years. He has a background of heroin and cocaine addiction and also admits to abusing methadone. He is dispensed methadone 120mg daily. His medical history includes HIV, hepatitis C, pneumonia, chronic leg ulcers and deep vein thrombosis. He is prescribed fluoxetine for depression. He was prescribed ciprofloxacin for a lower respiratory tract infection. He presented to an Accident and Emergency department and was admitted medically with symptoms of chest pain, shortness of breath, cough, dizziness, tiredness and feeling faint. His urine toxicology was positive for heroin, methadone, cocaine and benzodiazepines. His 12 lead ECG showed QTc 490 msec. He was treated with co-amoxiclav for pneumonia. His methadone dose was reduced to 100mg once daily. His ECG then showed QTc 417 msec. He was discharged back to drug treatment services.

Discussion

Methadone induced QT prolongation is not an uncommon event and is associated with Torsades de Pointes, a life-threatening ventricular arrhythmia. Patients on the methadone maintenance programmes may have a history of abusing cocaine, tend to have additional medical problems, may also be taking additional medications (eg. CYP3A4 inhibitors) and are prone to experience electrolyte disturbances. These risk factors may act synergistically with methadone to prolong the QT interval. Heroin addicts sometimes faint whilst using recreational drugs and doctors might attribute these episodes of syncope to illicit drug use and thereby underestimate the incidence of Torsades de Pointes in this population.^{10,11}

Physician awareness and knowledge of the effects of methadone dose on QT prolongation and development of Torsades de Pointes is of huge importance. Patients on methadone would benefit from screening for cardiac risk factors. An electrocardiogram is deemed important in patients on high doses of methadone, an increasing methadone dose and if commencing QT prolonging medications.

Drug-drug interactions play a key role in the occurrence of QT interval drugs. Routine toxicology screening is invaluable to monitor for abusing cocaine and unreported methadone physicians need to enhance the monitoring of out at risk vulnerable population who lead a chaotic lifestyle and some without a general practitioner. Improved communication between drug treatment services, general practitioners, infectious disease clinics and cardiology department to ensure follow up and management of our at risk population.¹²

**Deirdre Hussey,
Catherine McCarthy,
Eamon Keenan,**

National Drug Treatment Centre,
Pearse Street,
Dublin, Ireland.

References

1. Weschules DJ, McMath JA, Gallagher R et al. Methadone and the hospice patient: prescribing trends in the home-care setting. *Pain Med* 2003; 4: 269-76.
2. Niveau G, Rougemont AL, La Harpe R. Methadone Maintenance treatment, criminality and overdose – related deaths. An ecological study, 1983 – 1999. *Eur J Public Health* 2002; 12: 224-7.
3. McCaffrey BR. Methadone treatment: our vision for the future. *J Addict Dis.* 2001; 20: 93-101
4. Stitcheiling C, Schaer B, Ammann P et al, Methadone – induced Torsades de Pointes tachycardias. *Swiss Med Weekly* 2005 135: 282-285.
5. European Agency for the evaluation of Medicinal Products, EMEA public statement to suspend the marketing authorization for Orlaam (levacetylmethadol) in the European Union. April 19 2001.
6. Deamer RL, Nilson DR, Clark DS et al. Torsades de Pointes associated with high dose levomethadyl acetate (ORLAAM) *J Addict Dis* 2001; 20: 7-14
7. Stitcheiling C, Schaer B, Ammann P et al, Methadone – induced Torsades de Pointes tachycardias. *Swiss Med Weekly* 2005 135: 282-285.
8. Gupta A, Lawrence A, Krishnan K et al, Current Concepts in the mechanism and management of drug-induced QT prolongation and Torsades de Pointes. *American Heart Journal*, June 2007 153(6): 891-899.
9. Martell BA et al, Impact of methadone treatment on cardiac repolarisation and conduction in opioid users. *Am J cardiol* 2005; 95: 915-918
10. Krantz MJ, Lewkowicz L, Hays H et al. Torsades de pointes associated with very high dose methadone. *Ann Intern Med* 2002; 137: 501-4
11. Whret G, Voide C, Gex-Fabry M et al. Drug Induced Long QT Syndrome in Injection drug users receiving Methadone. *Arch Intern Med* 2006;166: 1280-1287
12. Fanoë S, Huidt C, Ege P et al, Syncope and QT prolongation among patients treated with methadone for heroin dependence in the City of Copenhagen. *Heart* 2007 Sept; 93(9) 1051-5
13. Lamont P, Hunt S, A twist on Torsade: A Prolonged QT interval on Methadone. *J Gen Intern Med* 2006, November 21(11), C9 – C12

Community placement planning for a long stay in-hospital population

Dear Editor – The policy report “Planning for the Future” recommended the increased transfer of patients from Psychiatric Hospitals to community-based care programmes services.¹ However, despite the increase in community alternatives in recent years, the provision of these services remains inadequate.^{2,3} Care in the community can only work for patients who are well enough to live and survive in the community, and consequently a systematic needs-assessment approach is essential for responsible and effective placement planning.⁴ Such planning requires multidimensional needs-assessment rather than just diagnosis-based approaches, as diagnosis alone is a poor predictor of patients’ needs as well

as their use of resources.⁵ In the present study, the institutional and community service requirements of patients from the inpatient facilities of an urban psychiatric hospital were assessed. In addition, patient preferences for long-term care and accommodation were elicited.

Method

St Brendan’s Hospital is a long-established public hospital offering long term and continuing care needs for people with high levels of psychiatric and social disability, as well as rehabilitation services for those with high levels of psychiatric need. Data on all current long-stay patients (n = 71) were analysed in the current study.

The Community Placement Questionnaire (CPQ) is a standardised scale completed by a multidisciplinary team member involved in the patient’s daily care.⁶ The CPQ is divided into two sections: 1) basic patient information, 2) factors associated with community placement, including the patient’s social functioning, problem behaviours, physical disability, and daytime activity levels. An overall index of the patient’s level of social functioning can be derived and patients can be classified into one of five categories ranging from very poor to high. A “Hard to Place” score can also be derived based on weightings applied to items and a score greater than 10 is judged as potentially “Hard to Place.” A number of studies have used the scale in Irish samples.⁷⁻⁹

Differences in proportions of categorical data were analysed using the binomial test, and associations between categories were assessed using χ^2 two tests. Comparisons between groups in relation to continuous data were performed using independent samples t-tests and all comparisons were two-tailed. Statistical significance was set at .05 for all comparisons.

Results

The sample of 71 patients comprised significantly ($p < .001$) more males (n = 52) than females (n=19), and was predominantly single (85%). Over two-thirds of patients were diagnosed with schizophrenia, and the average age was 51.9 years (sd = 11.9 years). The sample comprised 40 voluntary admissions (56%) and 31 (44%) compulsory detainees. The mean length of time in hospital was 95 months (sd = 101 months), and 53% percent were in the hospital for up to 5 years, 14% were in hospital for 6-10 years, and 33% were in hospital for over 10 years.

Social, behavioural and psychological functioning

Social functioning can be categorised into five categories and the sample was characterised by a low level of functioning, with the percentages falling into each category presented in *Table 1*, alongside comparative data from the UK.

The sample had significantly poorer social functioning than the both the validation sample of long-stay patients in the UK ($\chi^2(3) = 12.6, p < .01$) and community treated psychiatric patients ($\chi^2(3) = 71.2, p < .0001$).

In general, the patients were characterised by relatively high levels of behavioural (eg. stealing, inappropriate sexual behaviour, alcohol/ drug use, threatening behaviour) and psychological (eg. behaviour consequent on delusional beliefs, cognitive impairment) difficulties. Over one third of the patients (38%) had serious to very serious problems with socially unacceptable behaviours that could make placement difficult. For example, over one third of the patients were rated as having dangerous tendencies towards staff, and/