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Commentary

Assessment of physical health needs of patients on the Psychiatric Intensive Care Unit (PICU)

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Abstract

People with SMI have high levels of physical illness and significantly raised natural mortality compared to the general population. This is largely explicable by altered exposure to ordinary environmental risk factors and to poorer quality of medical treatment; partly because SMI can interfere with the individual's ability to organise their healthcare and partly because it can affect the quality of treatment delivered by professionals.

People with SMI can suffer the same range of physical illnesses as anyone else in the population but are at significantly greater risk of developing particular illnesses. Admission to a PICU presents an excellent opportunity for assessment and management of their physical health needs. PICU staff have a responsibility to develop effective mechanisms for identifying and treating acute physical illness, they also need to think about how best to address the detection and management of chronic physical illness and about their responsibilities in respect of health promotion.

Keywords

Mental illness; physical health; psychiatric intensive care unit (PICU); psychiatric in-patient; screening

BACKGROUND

People with serious mental illnesses (SMI) such as schizophrenia and bipolar affective disorders have significantly raised mortality from natural causes (Harris & Barraclough, 1998). Research findings in a particular cohort will be affected by variables such as age, gender distribution and prevalence of smoking but schizophrenia, the most common diagnosis among patients admitted to PICUs, probably causes a 20 year reduction in average life expectancy (Newman & Bland, 1991). Some of this is due to unnatural deaths but most to raised mortality from common medical diseases (Brown, 1997). The increased natural mortality is largely due to altered exposure to known environmental risk factors (Kendler, 1986) though there may also be a genetic element. For example, the variation in the rate of deterioration in pancreatic beta cells is genetically controlled and may contribute to the increased incidence of diabetes in schizophrenia, (Henderson & Ettinger, 2003).

Evidence that the natural mortality, especially from cardiovascular disease, of people with SMI is increasing (Ösby et al., 2000), has caused mental health services to be more active in addressing physical healthcare than was previously the case. We know that people who are in contact with mental health services, and

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Table 1. *Mechanisms of increased physical morbidity in people with SMI*

- Physical illness can occur as a direct consequence of SMI (e.g. anorexia nervosa).
- Physical illness may develop as a result of the generally unhealthy lifestyle (poor diet, exercise, obesity, substance misuse) and social deprivation which often follows SMI, or as a side effect of exposure to psychotropic medication.
- Physical illness can cause or exacerbate psychological symptoms (e.g. thyroid deficiency).
- SMI can delay the presentation, recognition (by patients, carers and clinicians) and treatment of physical illness.

especially those who are admitted to psychiatric in-patient units, have high rates of physical co-morbidity (Jeste et al., 1996; Sebastian & Beer, 2005). They also get less effective treatment of their physical diseases than the general population (Druss et al., 2001). The multiple, and often overlapping, reasons for these high rates of physical co-morbidity and poorer treatment are shown in Table 1.

Mental health services should aim to provide their patients with the same access to assessment, screening and treatment as the rest of the population. There is a general consensus that primary and secondary care services should co-operate to provide quality healthcare for people with SMI (NICE, 2003) but this is not straightforward. Primary care services are not always good at engaging people with SMI, and non-medical mental health practitioners often lack training in physical healthcare delivery. The most chaotic and unwell people with SMI are likely to slip through the gaps in the services. These are exactly the people who are admitted to a PICU. Once there they can expect to get effective treatment of their mental illness which may then offer a rare opportunity to address physical healthcare issues.

MEDICAL ILLNESS AND SMI

People with SMI are at high risk of particular medical conditions, partly through the mental illness (e.g. self neglect, side effects of psychotropic drugs) and partly through its lifestyle consequences (e.g. substance use, poverty and poor housing). Physical illness may also present with predominantly psychological symptoms. All staff should therefore be alert for indicators of possible physical illness. These include: pyrexia, altered or fluctuating level of consciousness, neurological signs and prominent visual hallucinations. Some of the medical conditions which are particularly associated with SMI are shown in Table 2.

The metabolic syndrome is a term used to describe a group of associated metabolic disturbances (Citrome, 2005), thought to be caused by unhealthy diet and lack of exercise. It is reaching epidemic proportions throughout the developed world and is a major risk factor for cardiovascular disease. The prevalence in people with schizophrenia is probably 2–4 times that in the general population (Heiskanen et al., 2003). The diagnostic criteria are shown in Appendix 1.

HEALTH ASSESSMENT ON THE PICU

People who are admitted to the PICU will have high rates of co-morbid physical illness and may have had little contact with medical services. It is therefore vital that they receive a good physical health assessment during their stay. If they refuse this on admission, it must be addressed later in their stay, possibly waiting until their mental health improves. Nursing staff can do initial health screening but a formal examination should be done by the ward doctor, who has the necessary training. This process is likely to be facilitated by specific paperwork. The record sheet used on Mayflower ward, the nine bedded Southampton PICU (Brown & Bass, 2004), is shown in Appendix 2.

The assessment should include a comprehensive physical health history, with specific enquiry about symptoms of high risk conditions, a comprehensive physical examination and appropriate investigations. We need to remember that people with SMI may not be good at reporting symptoms. Their recognition of illness

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Table 2. *Medical conditions particularly associated with SMI*

- Particular antipsychotic drugs are associated with a wide range of potential side effects. The more common include constipation, weight gain, obesity, lipid dysregulation, diabetes, the metabolic syndrome, blood disorders, movement disorders, cardiac arrhythmias, epilepsy, sexual dysfunction and osteoporosis.
- Particular mood stabilising drugs can cause renal, hepatic and thyroid toxicity.
- Alcohol misuse can lead to liver disease, pancreatitis, other GI problems, neuro-psychiatric disease (e.g. Wernicke's encephalopathy), peripheral neuropathy, cardiomyopathy and epilepsy.
- Smoking related illnesses include a variety of cancers, chronic lung disease, peripheral vascular disease, cardiac disease and strokes.
- Illicit drug use can lead to problems such as respiratory depression, hypertension, cardiac problems, strokes and withdrawal fits.
- IV drug use puts people at risk of conditions such as HIV, Hepatitis B and C, septicaemia and subacute bacterial endocarditis.
- Other SMI related illness include dehydration and renal impairment, malnutrition and vitamin deficiency. Self neglect also increases susceptibility to infectious diseases such as influenza and TB.
- Endocrine diseases, substance misuse and many other medical conditions can produce psychological symptoms which may mimic or complicate SMI.

may be impaired by psychological symptoms (psychotic beliefs, cognitive impairments, increased pain tolerance). Their ability to communicate symptoms and take treatment may be impaired by psychological factors such as poor motivation and distraction by psychotic symptoms. Carers may ignore symptoms or wrongly attribute them to mental illness. It is therefore important to ask direct and specific questions and to keep a high level of awareness about the possibility of physical illness. It is also important that the ward has a suitable room for conducting physical examinations and ready access to the necessary equipment (Appendix 3). This needs to be checked regularly.

CHRONIC ILLNESS MONITORING

Admission to a PICU also offers the opportunity to diagnose and review treatment of chronic medical conditions such as hypertension and diabetes. This is an important role as significant numbers of people with SMI die from the consequences of under treated chronic physical illness (Brown et al., 2000). Reducing the mortality risk requires effective long term treatment strategies. These can be initiated in hospital but need to be continued after discharge. The PICU must therefore have effective communication with other wards, community mental health teams (CMHT) and GPs, and have systems which ensure that treatment plans and investigation results reach the people who need them. It also needs to consider interventions such as simple treatment regimes and the use of dosette boxes – the same sort of strategies which are used to optimise mental health treatment. Guidelines may be useful in making physical health treatment decisions for common conditions such as hypertension.

HEALTH PROMOTION

Change to a healthier lifestyle reduces illness and increases life expectancy. Health promotion is a central plank of the government's healthcare strategy (Department of Health, 2004). This has had mixed results in the general population: smoking rates are falling but obesity is increasing (Department of Health, 2006). In the case of people with SMI, diet (McCreadie et al., 2005), exercise (Brown & Chan, 2006), smoking (George et al., 2000) and obesity (Pendlebury et al., 2007) can all be modified for particular individuals but there is little evidence that improvements are sustained or that they make much difference to the overall levels of illness in the population with SMI (Lawlor & Hopker,

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2001). In the PICU, as in the general population, the hardest people to engage are likely to be those at greatest risk.

Nevertheless, the PICU does offer an opportunity to raise the issue of healthier lifestyle through group work, individual care plans and personal example. Effective treatment of the SMI means that patients may be at their healthiest mentally whilst in the PICU and hence both willing and able to address physical health issues. This may also provide a way into discussing the more emotive area of mental healthcare. Any lifestyle changes would need to be sustained to make a difference to long term health, hence good planning and communication with other services is again important.

DO NO HARM

PICU staff treat people who are very unwell and sometimes use risky procedures such as physical restraint, rapid tranquilisation, polypharmacy and high dose antipsychotic therapy. These interventions are associated with rare but catastrophic sudden deaths (Abdelmawla & Mitchell, 2006) hence it is vital to keep up to date with recommendations about treatment delivery and monitoring. A person trained in immediate life support, maintenance of an airway, cardiopulmonary resuscitation and the use of defibrillators, should be available on site at all times (NICE, 2005). Guidelines should be followed unless there is a very good reason not to. Prescriptions must be legible and unambiguous. Treatment must be proportionate and side effects balanced against risks. Staff must be adequately trained as the effective use of psychological interventions can reduce the incidence of physical assault (Infantino & Musingo, 1985). These interventions should usually be tried before physical restraint and parenteral medication (Beer et al., 2001).

PROBLEMS

While the PICU can be a good place to address physical health issues, there are particular problems inherent in the environment. There is a real ethical dilemma about how far a PICU is entitled to go in promoting healthy choices, especially to detained patients. PICUs have been obliged to follow anti-smoking laws but should probably involve service users in deciding how far they should go in imposing a healthy lifestyle. Compulsory admission is a major restriction on liberty. Supplementing an unattractive hospital meal with a take away and fizzy drink is one of the few ways in which detained patients can regain some personal autonomy.

Patients may welcome discussion of their physical health as a more acceptable alternative to mental health interventions. This may then serve as a way in to discussing mental health issues. Others however will be too angry at being detained in hospital to engage in any meaningful discussion. Staff will also have differing views about the importance of physical health (Hyland et al., 2003). This probably reflects their own choices and may impact on their readiness to go the extra mile in addressing physical health issues. Some will also need training to improve their physical healthcare skills especially in immediate life support (NICE, 2005). PICU staff also need to consider our responsibilities as role models.

SUGGESTIONS

Physical health assessment and management must be incorporated as a standard part of the care plan. There should ideally be a senior staff member with responsibility for monitoring physical healthcare delivery – formal health assessment, access to exercise, quality of diet, ward environment, availability and maintenance of examination equipment. Effective recording of health assessment needs specific paperwork – results arrive at different times in different formats and are otherwise very difficult to collate. Ward staff should also be trained in simple procedures such as phlebotomy in order that the ward is not dependent on outside clinicians who may have limited availability or may even refuse to work in the PICU. Finally the PICU staff have a clear responsibility to provide the best possible physical and emotional environment for the patients under their care.

SUMMARY

Mental health services should ensure that people with SMI have regular examination and screening to ensure early identification of physical health problems. They should also have timely investigation, monitoring and follow-up of physical health problems. This should include appropriate referral to other health services where necessary. Promotion of positive lifestyle change such as healthy eating, smoking cessation, should also be initiated, where indicated. The PICU may not seem an obvious place to address these problems but it may actually be a good environment to make a start on this process.

DECLARATION

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APPENDIX 1. DIAGNOSTIC CRITERIA FOR METABOLIC SYNDROME

At least three of:

- Waist circumference > 102 cm (male) > 88 cm (female)
- Triglyceride level > 1.7 mmol/L
- HDL < 1 mmol/L (male) < 1.3 mmol/L (female)
- Blood pressure > 130/85
- Fasting glucose > 6.1 mmol/L

(Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults, 2001)

APPENDIX 2. PHYSICAL HEALTH SCREENING SHEET

Physical Health Screen

Patient's name ..... D O B ..... Hospital Number .....

History of serious physical illness	
Alcohol history	
Drug history	
Exercise history	
Pulse and BP	
ECG	
Height (metres)	
Weight (Kg)	
BMI(weight/height^2)	
Abdominal circumference (cm)	
Tardive dyskinesia/dystonia	
Random glucose	
Urea and electrolytes	
Thyroid function	
Liver function (including GGT)	
Blood count (and ESR)	
Lipid profile	
Any relevant drug levels	
Urine Drug Screen	

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APPENDIX 3. BASIC MEDICAL EQUIPMENT

stethoscope
sphygmomanometer
ophthalmoscope
auroscope
thermometer
tendon hammer
weighing scales
height measure
urinalysis strip
ECG machine

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