Management of acutely disturbed behaviour in the general hospital

Mental health problems are common features of older adults in hospital. Acute behavioural disturbance may be a presentation of delirium but it might also be misunderstood by clinical staff, and individuals with specific problems, such as dysphasia or agnosia, could be mislabelled as confused. Dr John Naylor, Mrs Samantha Boothroyd and Professor John Wattis outline a management approach and present the role of the liaison nurse to the psychogeriatric team.

Two-thirds of NHS beds are occupied by people aged 65 and over. Approaching 60 per cent of general hospital admissions in this age group will have or develop a mental health issue during their admission. Increasingly, specialist liaison psychiatry services are developing. Many people with mental disorders on the general wards (or indeed in intermediate care settings) will exhibit disturbed behaviour. However, some patients with depressed mood or with less florid types of delirium will be withdrawn and their distress may go unrecognised. The disturbed behaviour and underlying problems may lead to increases in lengths of stay, greater rates of institutionalisation and higher mortality rates.

Three case studies (boxes 1–3) illustrate key points:

**Case study 1**

A frail elderly woman telephoned the emergency services several times but was unable to explain her concerns. On arrival the ambulance crew found that she and her house were in a very neglected state. In A&E it was noted she was wearing soiled clothing, had very long and uncared for hair, long overgrown toenails and multiple bruises. She was generally agitated and repeatedly requested to be returned home, as she could not recall telephoning for the ambulance. A Mini Mental State Examination (MMSE) identified some evidence of cognitive impairment, poor insight and short term memory loss. When her daughter, with whom she lived, was interviewed the daughter was found to be in a similarly dishevelled state and had a more marked cognitive impairment. The daughter’s perception was that she and her mother functioned quite independently at home but she was frustrated by the extent to which her mother could become demanding. It was decided that, although physically well, this woman would be at risk at home without support. After a short period in a social services assessment unit during which time the community mental health team worked with the daughter, this elderly woman was discharged home to live with her daughter.

Acutely disturbed behaviour may be due to causes other than delirium, dementia and mental illness.

‘There is a written scroll! I’ll read the writing. All that glistens is not gold, often have you heard that told; (The Merchant of Venice | Act II, Scene 7)’

When approaching an individual with acutely disturbed behaviour, remember they may not have delirium or dementia. First, it is important to understand if the patient has an incomplete or distorted perception of their surroundings or recent events. Individuals with sensory impairments, hearing or vision especially, may misunderstand or misperceive external events and so behave in a manner that would be appropriate if they were being threatened or attacked. Hospitals are frequently noisy, making it difficult for people with impaired hearing to fully grasp what is being said. At night wards are
dimly lit, increasing the chances of an individual with poor vision misperceiving their surroundings as threatening. Add to this the anxiety of being away from their own home, perhaps away from other family who may be just as vulnerable as they are, then it is possible to see how easy it would be for such an individual to become acutely disturbed in the absence of any other underlying medical condition.

Alternatively, the acute disturbance may be provoked where an individual cannot be understood. People who present with dysphasia due to stroke illness may be at first labelled as confused. Staff may not notice that the person’s inability to communicate due to a specific language deficit is the only cognitive impairment they have and their behaviour is otherwise appropriate. It may be more difficult to identify this with a fluent dysphasia where the language contains jargon and neologisms, rather than a non-fluent dysphasia with little or no language. Once this is appreciated it is possible to see the acutely disturbed behaviour as a specific language deficit and find alternative means to communication. Additionally, one can appreciate the frustration the individual must experience. At times this frustration might produce understandably challenging behaviour. One can also see that people who, following stroke illness, develop alterations in self perception due to higher sensory impairments may be at risk of disturbed behaviour provoked by these alterations of perception. It is important to look for sensory impairments or focal neurological impairments in anyone presenting with acutely disturbed behaviour and to understand that behaviour that may seem irrational from a bystander’s perspective may be quite rational given the patient’s perspective from behind the sensory or neurological impairments. Finally, as case study three (page 56) exemplifies, the acutely disturbed behaviour may be part of the usual timeline of a self limiting illness such as epilepsy. Frequently in adult onset epilepsy, a witness account of a seizure is not obtained and the individual may only present with the post-ictal confusional state.

**Figure 1. Dilemmas**

<table>
<thead>
<tr>
<th>Drugs</th>
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<tbody>
<tr>
<td>Infection</td>
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<tr>
<td>Low O₂ (eg, heart failure)</td>
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<tr>
<td>Epilepsy</td>
</tr>
<tr>
<td>Myocardial infarction</td>
</tr>
<tr>
<td>Metabolic disturbance</td>
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<tr>
<td>Anaemia</td>
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<tr>
<td>Stool impaction or stroke</td>
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When delirium is recognised a systematic approach to diagnosing and managing the underlying disorder is essential.

Having established that the acute disturbance in behaviour is probably delirium and is not explicable by the misunderstanding of either the staff or patient, it is important to consider the underlying cause for the problem rather than simply manage it with sedation. The patient context may be important. In surgical patients, risk factors for delirium include age, preoperative cognitive impairment, poor functional status, alcohol use and polypharmacy. Among these, baseline dementia is the major risk factor for delirium in the postoperative period. In nonsurgical hospitalised elderly patients, independent precipitating factors for delirium include alterations in the wake/sleep cycle, malnutrition, the use of physical restraints, the use of bladder catheters, the need for more than three medications and any iatrogenic event during hospitalisation. A useful mnemonic for possible underlying causes for disturbed behaviour and delirium in older people is seen in Figure 1: Dilemmas. Common drugs that may produce confusion and disturbance are tranquillisers, opiates and drugs with anticholinergic effects or side effects. Also important to be aware of, is drug withdrawal as a cause of disturbed behaviour — including alcohol.

Metabolic disturbance, such as hyponatraemia, hypoglycaemia or hypercalcaemia, need to be considered as possible causes of behavioural change. In addition to the above it should be remembered that pain, anxiety, hunger, thirst or cold might provoke behavioural disturbance in an individual with existing cognitive impairment with or without communication problems. Remember to look for a distended bladder, a sacral pressure sore or a full rectum as causes of pain and disturbance, especially in an older person with dementia. Other mental disorders such as depression, mania and schizophrenia may co-exist in physically ill patients and may cause behavioural disorder. Having established that the disturbed behaviour is not either simply explicable or due to misunderstanding on the part of the staff — and having excluded physical causes of the problems — it is important to consider specific mental health diagnoses. There is some controversy as to whether a late or very late onset variant of schizophrenia exists. ICD-9 (International Classification of Diseases, Revision 9) included the diagnosis ‘late paraphrenia’ to describe patients who had schizophrenia with an onset delayed until after the age of 55 or 60 years. DSM-III-R (Diagnostic and Statistical Manual of Mental Disorders, 3rd Edition, Revised) contained a
category of late-onset schizophrenia for those cases with an onset after the age of 44 years. The available evidence supports the recognition of three age-at-onset related categories for patients with schizophrenia and schizophrenia-like psychoses. They are:

- early-onset (before 40 years) schizophrenia is the most typical form.
- late-onset (40–60 years) schizophrenia represent cases of ‘true’ schizophrenia with onset delayed into late middle age.
- very-late-onset (over 60 years) schizophrenia-like psychoses, although sharing many of the symptoms of schizophrenia, have a different set of associated risk factors and response to treatment than the other groups. This diagnosis should be considered in an individual presenting with disturbed behaviour where other conditions have been excluded.

Finally, an unusual behavioural disturbance may be a leading symptom of depression or mania. In his chapter of the New Oxford Textbook of Psychiatry, Gordon Parker presents a hierarchical model for psychotic depression as a subtype of depressive mood disorder rather than a distinct entity. Although there is discussion concerning the classification of affective disorders there is broad agreement that in psychotic depression the mood component generally appears to an observer to be more severe, the patient may deny or minimise a depressive mood. Delusions are almost invariably present while hallucinations (auditory, most commonly) are present in 10–20 per cent, according to representative studies. Patients with bipolar disorder may survive into old age. Sometimes the pattern of illness can change, often with increasing frequency of recurrences. Although the diagnosis is not usually in doubt, some of the episodes can be misdiagnosed — for example, a manic mood swing presenting with irritability and behaviour disturbance. Although mania is rare in older people, its occurrence may increase the likelihood of presentation to hospital in an older compared to a younger person.

**Case study 2**

A woman nearing 80 years of age had been brought to A&E having been found by home care sitting on the bedroom floor. She was agitated, confused and had been incontinent of urine. She was known to have a history of early dementia but lived alone at home with the support of a daily home care visit. The A&E assessment diagnosed a urinary tract infection, although there was no increase in temperature and no increased white cell count on blood tests. She was admitted to an elderly care ward and commenced on antibiotics. Her agitation and confusion improved over the following day and her discharge was planned. On the night prior to discharge she was seen by nursing staff to be shaking uncontrollably during her sleep. The episode lasted for less than one minute. When she awoke the following morning she was confused and agitated again, just as she had been at admission and complained of a headache. The urine culture obtained at admission was clear of infection and repeat blood and urine tests were once again normal. The possibility of nocturnal epilepsy was considered as a cause for the confusional state. A head CT demonstrated evidence of generalised small vessel disease but no major haemorrhage, infarct or mass lesion. Antiepileptic medication was commenced and she was able to return home with no further evident seizures or confusional episodes.

**Case study 3**

A male inpatient on an elderly care ward with a chest infection became acutely disturbed during two consecutive nights, attacking nursing staff with fire extinguishers and scissors. He had a history of early dementia and mild depressive symptoms prior to admission, but lived alone with minimal social care support. No physical cause could be found to explain his acutely disturbed behaviour, but as his sedation with lorazepam wore off his underlying paranoid ideation became more apparent. He complained that he felt he was being attacked by the ward staff and he needed to defend himself. He was transferred to a dementia care ward the same day. He was commenced on psychotropic medication and his aggressive outbursts gradually settled, allowing him to be discharged home some weeks later with increased home care and community mental health input.
dementia is a very frightening and distressing condition for patients, carers and nursing staff, perhaps resulting in verbally or physically aggressive outbursts. This is especially the case in an acute hospital where the surroundings and other activity on wards can be unsettling. It is possible to render a disturbed individual easier to manage for a short time with the use of benzodiazepine sedation. This treatment, however, carries with it considerable risk of over sedation, falls and injury. If patients are sedated before a physical cause for the agitation is found, then conditions such as acute urinary retention or pain from constipation may go undiagnosed.

Delirium will alter sensory perception. Visual perception is the modality most often affected. It is easy to see why patients with altered levels of consciousness and perception can be become agitated and fearful, misperceiving their environment as menacing or threatening. A shadow in a darkened room becomes an attacker causing the patient to call out for assistance when seemingly nobody else is in the room. Delirium may cause increased sensory awareness and increased agitation due to sudden or persistent noise. Delirium will also lead to varying degrees of disorientation to time. The artificial hospital environment will increase this disorientation. Patients do lose track of the time of day or the week. For all these reasons it is important to care for patients with disturbed behaviour in a good sensory environment:

- a quiet, well-lit room that has eliminated unexpected or irritating noise;

- The general management of a person with disturbed behaviour should include attention to their environment, the ward staff and their personal care with sedative drugs being used sparingly and at low doses.

Key points

- Acutely disturbed behaviour is a common problem with older people in hospital.
- The challenging behaviour may not be caused by delirium, depression, mania or a schizophrenia-like psychosis, but may be appropriate in an individual with the frustration of a dysphasia or a visuo-spatial disorder.
- The underlying cause for the behavioural disturbance should be systematically sought and the appropriate specific treatment given.
- The general management of a person with disturbed behaviour should include attention to their environment, the ward staff and their personal care with sedative drugs being used sparingly and at low doses.

References

2. Homes J, Bentley K, Cameron I. Between two stools: Psychiatric services for older people in general hospitals. 2002

> staff should approach the patient gently, explaining beforehand what they are about to do;
> it is important to ensure that all remedial action to improve sensory awareness has been taken;
> spectacles should be cleaned and worn, and hearing aids should be kept in good working order and used as appropriate;
> regular cues to time of day and day of the week should be provided, along with encouragement of visits from family and friends to improve personal orientation;
> continuity of staff and elimination of inter- or intraward moves will reduce the disturbance of environmental change and worsening of disturbed behaviour.

Having attended to the physical environment and the general approach of the care staff, it is important to avoid factors that will exacerbate disturbed behaviour. Delirium will alter sleep patterns and further tiredness will adversely affect behaviour. It is important to encourage the patient to establish a good sleep pattern. Hunger or thirst may worsen the situation, so a good diet and fluid intake is important. Constipation should be anticipated — attending to diet, fluid and mobility will reduce this problem. The use of sedatives and major tranquillisers should be kept to a minimum and drugs with anticholinergic side effects should be avoided, especially as they worsen behavioural disturbance though agitation, hallucinations and constipation. Sedation may be necessary to prevent patients from injuring themselves, to relieve distress in highly agitated or disturbed states, or to carry out essential tests or treatment. In such cases it is preferable to use only one drug and start at the lowest possible dose, increasing if necessary after a reasonable interval. Lorazepam can be given orally,
0.5-1mg with a maximum of 2mg in 24 hrs, if necessary it can be administered IM or IV. An alternative is haloperidol, 0.5mg orally repeated not more than two hourly to a maximum dose of 2.5mg in 24 hrs. Close observation of the patient is necessary when the dose of psychotropic medication is being titrated upwards in a controlled and safe manner.

The liaison nurse and psychogeriatric team
We have described the situation that commonly presents on an acute hospital ward where a patient develops disturbed and disrupting behaviour. There are a number of roles a psychiatric liaison nurse can undertake — assist the ward multidisciplinary team in assessment of the individual patient, speaking to relatives and other professionals from the primary health and social care community and advising the ward staff in immediate patient management. They can often be a valuable bridge to the more formal psychogeriatric team and may facilitate, where appropriate, patient transfer to mental health wards especially where formal mental health conditions such as psychotic depression, mania or schizophrenia are possible diagnoses. Liaison nurses play an increasingly important role in education. As the population is ageing and the numbers of old and very old people coming to hospital is increasing, the likelihood of having patients on a general ward at risk of developing delirium or who may have a pre-existing mental health concern is also rapidly increasing. The liaison nurse can not only assist in the management of the individual patient once they have presented with disturbed behaviour, but more importantly, they can educate ward staff to be alert to patients who because of age, polypharmacy, surgical procedure, pre-existing dementia or visual impairment are at high risk of developing delirium. The ward staff can then incorporate preventive strategies into such patients’ care plans and can institute early warning systems to identify the development of delirium at the beginning stage rather than only recognising it when the patient develops severe agitation or hallucinations. They, along with the psychogeriatric team, can assist in audit to review clinical practice and improve outcomes both in terms of patient experience and clinic outcome.

Conclusion
The management of acutely disturbed behaviour in older adults in general hospital is an important topic, important numerically and important clinically. It is important acutely disturbed behaviour is recognised and understood. It is important that it is not assumed to always be due to dementia or delirium, but may be a manifestation of the frustration a normal adult experiences in dealing with the system. It is important to have a systematic approach in assessing patients with acutely disturbed behaviour and to use such a systematic approach to make a diagnosis. Once underlying organic conditions have been excluded it is important to have close liaison with psychogeriatric teams and to consider that the disturbed behaviour may be a presentation of a formal mental health disorder. It is important that in managing an older adult with disturbed behaviour of whatever cause, nothing is done inadvertently to worsen the agitation and that all general steps are taken to reduce the disturbance and restore normality. Finally, it is important that systems and processes are developed to prevent delirium leading to disturbed behaviour in at risk groups of older adults, if delirium develops, that it is detected at an early stage and that such systems and processes are regularly audited and reviewed.

Conflict of interest: none declared.