Pharmacological management of behavioural and psychological symptoms of dementia

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ABSTRACT
Dementia patients with marked behavioural and psychological symptoms of dementia (BPSD) are best managed by geriatricians and psychogeriatricians. Both conventional and atypical antipsychotics have potential adverse effects. Non-pharmacological management is the preferred option for BPSD. Nonetheless, antipsychotics are a viable option in those with refractory behavioural symptoms. The minimal effective dose should be used in older people. BPSD is often transient, and thus regular monitoring of clinical status and review of indications are needed. In residential care homes for the elderly, improvement of staff-to-resident ratio and provision of staff training in BPSD management are essential for effective non-pharmacological therapy for affected patients.

INTRODUCTION
In Hong Kong, the prevalence of dementia is increasing owing to the ageing population. Management of behavioural and psychological symptoms of dementia (BPSD) is challenging for geriatricians and psychogeriatricians. According to the International Psychogeriatric Association, BPSD comprises disturbed perception, thought content, mood, and behaviour. The spectrum of symptoms is extensive and includes verbal and physical aggression, restlessness, agitation, screaming, pacing, anxiety, depression, psychosis with paranoid delusions and hallucinations, repetitive motor activity and vocalisation, disinhibited behaviour including inappropriate sexual behaviour, labile emotion, sleep disturbance, sundowning, and wandering. An epidemiological study reported that up to 60% of community-dwelling older adults and more than 80% of nursing home residents exhibit BPSD. In Chinese older adults, BPSD (including irritability and dysphoria) was present in up to 37% of patients with Alzheimer’s disease.

NON-PHARMACOLOGICAL MANAGEMENT
In many advanced countries, non-pharmacological management is the first and preferred option for BPSD. Pharmacotherapy is a second-line option for more severe and persistent BPSD not responding to non-pharmacological measures. Nonetheless, there are limited high-quality randomised controlled studies to show the efficacy of non-pharmacological management for BPSD. The common modalities include supervised person-centred care, dementia care mapping, behavioural management and communication skills, exercise therapy, reminiscence therapy, Montessori technique, sensory therapy activities and structured music therapies, bright light therapy, aromatherapy, Snoezelen multi-sensory environment, and home-like environment. Client-centred and tailored therapy guided by the patient’s background, interests, culture, religion, and life factors is the most important concept when treating BPSD. Effective non-pharmacological management is heavily dependent on adequate manpower and
caregiver training. In Hong Kong, the manpower in residential care homes for the elderly (RCHE) is often limited. The mean number of staff per 100 residents is less than 20 in most RCHEs. Staff training in non-pharmacological interventions for BPSD is also inadequate.

PHARMACOLOGICAL MANAGEMENT

Adverse effects of antipsychotics
Both conventional (e.g. haloperidol) and atypical antipsychotics (e.g. olanzapine, risperidone,quetiapine, clozapine) have been used for the treatment of BPSD. They appear to have modest-to-moderate clinical efficacy, although the most effective agents remain unknown. The use of antipsychotics in patients with dementia is associated with an increased risk of cerebrovascular events (including stroke) and death due to any cause. The potential mechanisms that lead to stroke and death include orthostatic hypotension, anticholinergic side-effects, Q-T prolongation, platelet aggregation effects, and venous thromboembolism. Inappropriately high doses of antipsychotics may lead to over sedation with increased risk of aspiration pneumonia and falls. They may also cause weight gain and increase the risk of diabetes and dyslipidaemia. Conventional antipsychotics and high doses of atypical antipsychotics are also associated with an increased risk of extrapyramidal side-effects.

In 2005, a meta-analysis reported that atypical antipsychotics were associated with increased mortality in the first 6 months of prescription compared with placebo. The US Food and Drug Administration (FDA) thus issued a ‘black box’ warning on the label of all atypical antipsychotics to indicate that they were not approved for use in older adults with dementia. Another meta-analysis reported that conventional antipsychotics were also associated with increased mortality in the first 6 months of prescription. The FDA thus also issued a warning on conventional antipsychotics, but did not bar their prescription to older dementia patients with BPSD. In Australia, risperidone is the only drug licensed for the treatment of severe and persistent aggression or psychotic symptoms in people with dementia. Subsequent observational studies have shown controversial results; some reported that antipsychotics could lead to increased mortality, while others showed that neither conventional nor atypical antipsychotics were associated with higher mortality. In a Hong Kong study of 599 older people with dementia in RCHEs, the anti-psychotics–exposed group and non-exposed (control) group were comparable in terms of mortality. This suggested that continuous use of antipsychotics for BPSD for more than 6 months was not associated with increased mortality among institutionalised Chinese older people with BPSD. The exposed group also had a lower median rate of hospitalisation. Patients on antipsychotics were less agitated and thus had a lower chance of physical injury. In addition, adequately treated patients might cause less carer stress among RCHE staff and were less likely to be sent to hospital for trivial medical problems.

Pharmacological alternatives
Pharmacotherapy for BPSD is an under-studied area, and well-designed clinical trials are scarce. Studies to evaluate other pharmacological agents for BPSD are few. Cholinesterase inhibitors, selective serotonin reuptake inhibitors, and melatonin have shown some benefits. Potential mood stabilisers such as carbamazepine, valproate, gabapentin, lamotrigine, oxcarbazepine, and lithium have been evaluated in a systematic review. Only carbamazepine has a clinically significant effect. It remains inconclusive whether alternative medications are safer and more effective than antipsychotics.

Balance between risk and benefits
Guidelines for BPSD management recommend pharmacotherapy as a second-line option for more severe and persistent BPSD not responding to non-pharmacological measures. Close monitoring for side-effects and regular review for continuation are needed. These guidelines also recommend obtaining consent from the patient or their substitute decision maker after explaining the modest benefit and potential adverse effects of antipsychotic treatment.

In Hong Kong, approximately 8.5% of older people are living in RCHEs. RCHEs are high-pressure areas for handling BPSD, as many older residents have dementia. Many local RCHEs are understaffed and many staff are not trained in non-pharmacological management for BPSD. Some RCHEs provide occupational therapy but the frequency and duration of sessions are insufficient.
Effective non-pharmacological management is difficult in RCHEs, except in those few that are well-staffed and well-equipped. Uncontrolled BPSD can cause considerable suffering to patients who may have frightening hallucinations, scary paranoid delusions, decreased appetite, sleep problems, and anxiety. This affects their relationship with family members. Adequate control of physical aggression and agitation may reduce the risk of older people harming themselves, their caregivers, or others. Sufficient control of BPSD may produce a less stressful environment for caregivers and older people and improve their relationship. Therefore, a balance between benefits and potential adverse effects is needed. One study in the Netherlands reported that nursing home physicians and nurses expected almost half of their patients with dementia and BPSD to benefit from antipsychotic therapy, and severe adverse effects were expected to occur only infrequently.30 These expectations may contribute to the high rate of antipsychotic use in RCHEs. Although expectations of local RCHE staff have not been explored, it is likely that similar attitudes and expectations prevail.

In Hong Kong, dementia patients with BPSD in RCHEs are usually managed by the Community Geriatric Assessment Team and psychogeriatricians.31 After careful assessment by geriatricians or psychogeriatricians, antipsychotics may be prescribed should non-pharmacological management is inadequate. Indications for antipsychotic medications for patients with dementia include severe agitation and aggression associated with risk of harm, delusions and hallucinations, and a comorbid pre-existing mental health condition. Clinicians should balance the risk and benefits of antipsychotic medication and explain to family members the reason for prescribing antipsychotics and potential adverse effects. The smallest effective dose should be used with slow and careful titration and minimal duration. Regular monitoring of clinical status and regular review of indications by geriatricians or psychogeriatricians are needed.

CONCLUSION

Dementia patients with marked BPSD are best managed by geriatricians and psychogeriatricians. Both conventional and atypical antipsychotics have potential adverse effects. Non-pharmacological management is the preferred option for BPSD. In patients with refractory behavioural symptoms, antipsychotics are a viable option after balancing the risk and benefits. The ‘start low and go slow’ strategy should be used when titrating antipsychotics for older people. BPSD is often transient and thus regular monitoring of clinical status and review of indications are needed. In RCHEs, improvement of staff-to-resident ratio and provision of staff training for BPSD management are essential to facilitate non-pharmacological therapy for patients with BPSD.

REFERENCES

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