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The use low dose antipsychotic medication in managing behavioural disturbance in older persons with dementia

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Alois Alzheimer observed behavioural disturbances in dementia over a century ago with a description of his first patient. Behavioural disturbances are prominent characteristics of dementia and can be very distressing to the individual, their family and caregivers. These symptoms include agitation, aggression, disinhibition, and sleep disturbances. Up to 90% of patients with dementia suffer from such behavioural disorders (Muller-Spahn 2003). This high prevalence may be partly due to a complex interaction of cognitive deficits, psychological symptoms, and behavioural abnormalities. In particular, it is purported that neurodegenerative processes in various brain areas, like fronto-temporal cortex and limbic regions lead to a dysfunction of key neurotransmitters like acetylcholine, serotonin and noradrenalin, leading to a cocktail of behavioural symptoms with personality traits playing a modifying role.

A large number of pharmacological treatment strategies have been used to manage behavioural disturbances in people with dementia. (Zudig 1996). These have included antipsychotics, benzodiazepines, or anticonvulsants. Though these drugs may substantially reduce undesirable behaviour, they may cause adverse side effect that may impact on the patient's ability to perform activities of daily living.

Historically, antipsychotic drugs have often been used to treat these behavioural abnormalities but the extant literature is sceptical about their long-term use for this indication (Declercq *et al.* 2013). Ostensibly, their long term effectiveness is limited and there is concern about their propensity to induce adverse effects, including higher mortality with long-term use. The National Institute for Clinical Excellence (NICE) guideline on dementia cautions against the use of any antipsychotics for non-cognitive symptoms or challenging behaviour of dementia unless the person is severely distressed or there is an immediate risk of harm to them or others (NICE 2015). However, other recent meta-analytic studies have challenged previous findings of the unfavourable safety profile of antipsychotics in people with dementia (Hulshof *et al.* 2015). Overall, current consensus favours the judicious treatment of aggression and psychosis with antipsychotics for no more than 12 weeks under carefully defined conditions (Zuidema *et al.* 2015).

Where the treatment with antipsychotics is indicated, a distinction ought to be made between antipsychotic treatment of severe behavioural symptoms (physical aggression or severe

agitation) that are the result of an underlying psychotic disorder and using antipsychotics for sedating reasons in acute situations where psychosis is absent.

The use of antipsychotics for an underlying psychotic disorder should only be for cases where severe continuous distress is affecting the quality of life of the patient, family or caregiver. Further, the disturbed behaviour shown by the patient should not be due to other somatic condition like pain, infection, hunger, constipation or other mental health conditions like anxiety/depression. Moreover, psychosocial interventions should have been tried without success and the benefit of using antipsychotics is expected to outweigh the adverse events (Banerjee Report 2009). Antipsychotic treatment might be justified in case of an extreme situation without psychosis if the behaviour is causing acute and tangible risks to the patient or other. Symptoms that may indicate an extreme situation are severe and harmful physical aggression, severe physical exhaustion, and severe eating/drinking disorders with a risk of malnourishment (weight loss) or dehydration.

Any use of antipsychotics should include a full discussion with the person and carers about the possible benefits and risks of treatment. Currently, only risperidone has market authorization for the treating of behavioural and psychological symptoms of dementia though many antipsychotic drugs are prescribed off label for this purpose. The risperidone licence for the short-term treatment of persistent aggression in Alzheimer's dementia was granted in 2008 after studies showed a clear benefit for behavioural problems for the short-term use of risperidone when aggression only was considered in people with dementia.

Antipsychotics come in various formulations that include oral tablets, injections and oral liquid formulations. Of these, oral liquids are preferred in people with dementia as they hold several advantages over oral or parenteral formulation (Mutsatsa and Bressington 2013). Available evidence suggests that oral liquid antipsychotics such as risperidone has a similarly rapid onset of action as an intra-muscular injection and are equally efficacious (Currier and Allen 2000; Carlson *et al.* 2010). This makes the use of oral liquid antipsychotics suitable in emergency situations. For the managing of behavioural symptoms in dementia, a low dose strategy is preferred. A starting dose of 0.5 mg of risperidone twice daily is recommended. This dosage can be individually adjusted with 0.5 mg twice daily increments to 1 to 2 mg twice daily.

In general, older people are more susceptible than younger people to the adverse effects of antipsychotics medication. Widely reported adverse effects are extrapyramidal symptoms, sedation, falls, accelerated cognitive decline, and increased risk of stroke and pneumonia. Many side-effects are dose related, so it is important to start treatment on the lowest dose possible, and gradually increase if necessary.

In conclusion, the use of antipsychotics in dementia is indicated only exceptional cases and even so, this should be for a short duration.

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