Systematic pain management reduced agitation in nursing home residents with dementia
BMJ. 2011;343:d4065.
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Introduction
Agitation is very common in people with dementia and antipsychotics have been commonly used with safety concerns.

Question
In nursing home residents with moderate-to-severe dementia, does systematic use of analgesics reduce agitation?

Methods
Design: Cluster-randomized controlled trial (RCT).
Blinding: Blinded (research assistants and caregivers in direct contact with participants during outcome assessment).
Follow-up period: a total 12 weeks. Evaluation at baseline, 2 week, 4 week, 8 week, and 12 week
Setting: 60 nursing home units in 5 municipalities of western Norway.
Patients: 352 adults ≥ 65 years of age (mean age 86yo, 75% women) who lived in one of the participating nursing homes for ≥ 4 weeks, met the Diagnostic and Statistical Manual of Mental Disorders, criteria for dementia, and had clinically relevant behavioral disturbances (Cohen-Mansfield Agitation Inventory [CMAI] score ≥ 39). Exclusion criteria included expected survival < 6 months; severe psychiatric or neurologic disorder; severe aggression; severe liver or renal failure; severe injury or anemia; and allergy to acetaminophen, morphine, buprenorphine, or pregabalin.
Intervention: Systematic, stepwise pain treatment for 8 weeks (n = 175: intervention group) or usual care (n = 177: control group). Pain treatment began at step 1 (oral acetaminophen, ≤ 3 g/d) or, if the patient was already receiving pain treatment, step 2 (oral morphine, ≤ 20 mg/d), step 3 (buprenorphine transdermal patch, ≤ 10 µg/h), or step 4 (oral pregabalin, ≤ 300 mg/d), with a fixed-dose regimen throughout the 8-week treatment period.
Outcomes: Agitation (CMAI). Secondary outcomes included pain (Mobilisation-Observation-Behaviour-Intensity-Dementia-2 [MOBID-2]), aggression, cognition, ADLs.

Main results
69% of patients in the pain management group received treatment at the step 1 level, 2% at step 2, 22% at step 3, and 7% at step 4. Agitation and pain scores were lower in the pain management group than in the control group at week 8. At
week 12 (4 weeks post-treatment), the pain management group had less pain than the usual care group, but the groups did not differ for agitation.

**Conclusion**
In nursing home residents with moderate-to-severe dementia, systematic use of analgesics reduced agitation during treatment but not after treatment was stopped.

**Discussion**

1. Why did it take 8 weeks to achieve the maximum results?
2. How do you explain that the control group also had improved scores?
3. Can patients with dementia without evidence of pain benefit from pain management?
4. Can empiric administration of pain medication replace antipsychotics?

Reference: modified from ACP journal club 2011 Nov Vol 155