



Poster 8



Department of Geriatrics



Development of delirium is associated with consumption of antipsychotic and anti-dementia drugs



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The old ward consisted of 5 three-bed rooms, 11 two-bed rooms and 2 single-bed rooms with 13 shared bathrooms.



The new ward consists of 32 single-bed rooms with own bathroom

1. Introduction

Previously, we demonstrated a substantial reduction of delirium incidence among geriatric patients after relocating from old hospital buildings with multiple-bed rooms to a new hospital with single-bed rooms. Medications that affect the central nervous system have been suspected of increasing the risk of delirium and falls among older geriatrics patients.

2. Aim

To investigate whether:

1. the reduced incidence of delirium in single-bed rooms was associated with a simultaneous change in medication use
2. the relocation had affected the incidence of falls
3. the use of analgesics and psychoactive medications was associated with delirium and falls among patients.

3. Material and methods

An observational study included 1,014 acute admissions among patients aged ≥ 75 years to the Geriatric Department of Aarhus University Hospital for both neurological, orthopedic and medical reasons: To the old wards between September 15, 2016 and March 19, 2017, and to the new wards between March 20, 2017 to December 19, 2017.

Method: Delirium was assessed by using the Confusion Assessment Method (CAM). From medical records, data on analgesics, psychoactive drugs and falls were extracted.

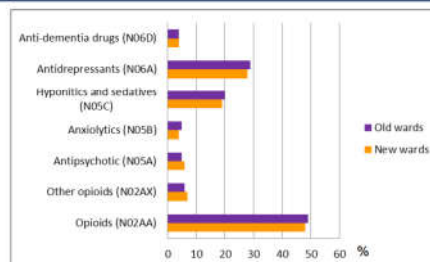
4. Results

- Baseline of 1,014 geriatric admissions were comparable between the two wards

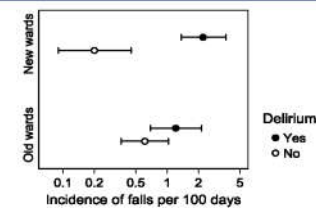
Incidence of delirium during hospitalization



Use of analgesic, benzodiazepines and antipsychotic drugs during hospitalization



Incidence of falls in relation to ward type and delirium.



Use of analgesic and psychoactive medications during hospitalization and the risk of falls or delirium

Medication exposure	Risk ratio for falls (95% CI) ¹	Hazard ratio for delirium (95% CI) ²
Opioids (N02AA)	0.92 (0.53-1.60)	1.13 (0.88-1.46)
Other opioids (N02AX)	0.61 (0.15-2.46)	0.45 (0.21-0.97) ³
Antipsychotics (N05A)	2.22 (0.98-5.00)	2.54 (1.61-4.01) ³
Anxiolytics (N05B)	0.48 (0.07-3.41)	0.94 (0.42-2.11)
Hypnotics and sedatives (N05C)	1.04 (0.53-2.05)	1.03 (0.69-1.53)
Antidepressants (N06A)	1.58 (0.90-2.76)	1.13 (0.86-1.48)
Anti-dementia drugs (N06D)	2.22 (0.84-5.87)	2.45 (1.46-4.11) ³

¹ The risk ratio compares users and non-users of the medication.
² The hazard ratio compares delirium after medication vs. no prior medication
³ Statistically significant difference

5. Conclusion

Medication of analgesics and psychoactive drugs was similar in the old and new wards. In single-bed rooms, but not in multiple-bed rooms there was a much higher risk of falls among inpatients that developed delirium than among other patients. Patients who had used antipsychotics and anti-dementia drugs during hospitalization had increased risk of developing delirium and an insignificantly higher risk of falls.