

Prescriptions of Painkillers and Antipsychotics in Patients with Dementia who Have a Pain Related



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Purpose

The purpose of this research is to compare people with dementia who have a pain related diagnosis and determine if there is a difference in the rates of analgesic and antipsychotic prescription.

Methods

This study used the design of a retrospective study. The sample population for this study was derived from 2,000,000 subject randomly sampled within National Health Insurance Research Database (NHIRD), Taiwan between 2000-2013 cohort registries. The ICD-9-CM diagnostic codes were used to identify people diagnosed with dementia and those diagnosed with at least one pain related diagnosis (such as rheumatoid arthritis, osteoarthritis, osteoporosis, hip fracture). If those codes were recorded on inpatient and ambulatory care orders within one year after people being diagnosed with dementia, then they were selected as participants of the study. Medicine use collection time was within one month after the date of selected participants with a pain related diagnose.

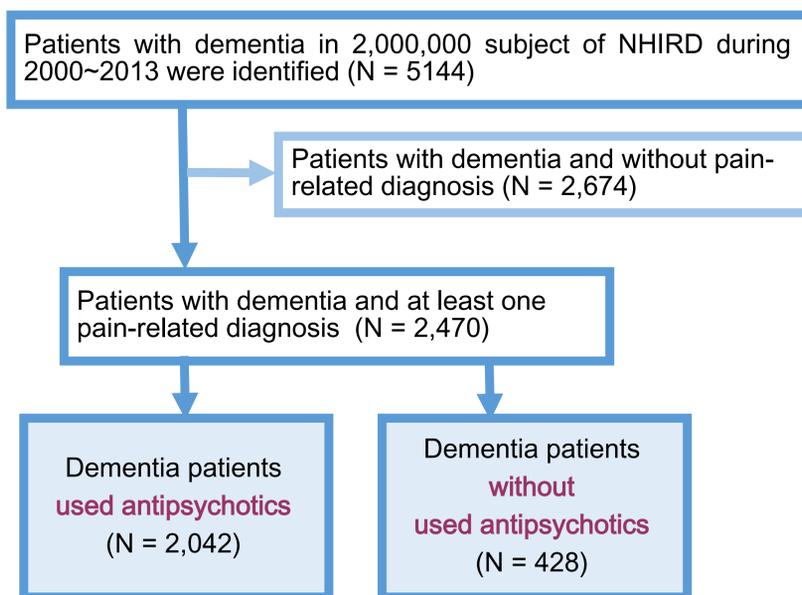


Figure 1. Study patient selection process

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Medicine use was determined by whether or not the prescriptions given by physicians for analgesics (paracetamol, opioids, and NSAIDs) and antipsychotics. The Chi-squared test was used to compare those who did and did not use antipsychotics and see if there was a difference in the rate of analgesic use.

Table 1. Characteristics of the patients with dementia who were identified from the National Health Insurance Research Database of Taiwan

Characteristics	Dementia patients (N=5144)	
	n	%
Mean age, in years (mean ± SD)	71.43±12.39	
Age group (years)		
≤64	1158	22.51
65-74	1661	32.29
75-84	1768	34.37
≥85	557	10.83
Sex		
Male	2467	47.96
Female	2677	52.04
Pain-related diagnosis		
At least one	2470	48.02
None	2674	51.98
Analgesic drugs		
At least one	4303	83.65
None	841	16.35
Psychotropic drugs use		
At least one	3745	72.80
None	1399	27.2

Results

This study found a total of 2470 dementia patients were given at least one pain diagnosis. Among this group, 2042 dementia patients used antipsychotics and 428 did not use antipsychotics. A Chi-squared test of the study's results reveals the rate of dementia patients using antipsychotics who received at least one kind of analgesics (96.18%)

was significantly higher than that of dementia patients who did not use antipsychotics (86.21%) ($p < .001$). Besides this, the rates of the two groups using paracetamol (82.86% vs. 64.25%, $p < .001$), NSAIDs (12.83% vs. 7.24%, $p = .001$) and opioids (88.15% vs. 70.56%, $p < .001$) were all significantly different.

Table 2. Comparisons of analgesic drugs use between patients with dementia (with at least one pain diagnosis) use and not use anti-psychotropic drugs

Type of analgesic drugs	Use anyone anti-psychotropic drugs (n=2042)		Not use anyone anti-psychotropic drugs (n=428)		χ^2	p-value
	N	%	N	%		
At least one type	1964	96.18	369	86.21	67.0716	<.0001
Paracetamol	1692	82.86	275	64.25	75.5449	<.0001
NSAIDs	262	12.83	31	7.24	10.5661	0.0012
Opioids	1800	88.15	302	70.56	86.3287	<.0001

Conclusion

People with dementia who have a pain related diagnosis who use antipsychotics have a higher rate of analgesics prescription than those who did not use antipsychotics. Past research indicates that use of antipsychotics among people with dementia increases the risk of falling. For this reason, when faced with managing psychological symptoms and pain while caring for dementia patients, the use of analgesics and antipsychotics is a challenge for healthcare professionals. The future research may go a step further to investigate whether or not physicians may be more likely to prescribe analgesics to people suffering from dementia due to behaviours and psychological symptoms of dementia. Another area to investigate is whether or not patients with dementia, but do not have psychological symptoms, are at risk of not having their pain treated appropriately.