

## Journal Watch

### Psychoactive medications and risk of delirium in hospitalized cancer patients

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#### Abstract

*Purpose:* Psychoactive medications are biologically plausible and potentially modifiable risk factors of delirium. To date, however, research findings are inconsistent regarding their association with delirium. The association between exposure to anticholinergics, benzodiazepines, corticosteroids, and opioids and the risk of delirium was studied.

*Patients and Methods:* A total of 261 hospitalized cancer patients were followed up with repeated assessments using the Nursing Delirium Screening Scale for up to 4 weeks for incident delirium. Detailed exposure to psychoactive medications was documented daily. Strengths of association with delirium were expressed as hazard ratios (HRs) in univariate and multivariate analyses by using Cox regression models. All medication variables were coded as time-dependent covariates. Whenever possible, exposure was computed by using cumulative daily doses in equivalents; dichotomous cutoffs were determined.

*Results:* During follow-up (mean, 8.6 days), 43 patients became delirious (16.5%). Delirium was associated with a history of delirium and the presence of hepatic metastases at admission. Analysis of the effect of medications was performed adjusting for these factors. Patients exposed to daily doses of benzodiazepines above 2 mg (HR, 2.04; 95% CI, 1.05 to 3.97), above 15 mg of corticosteroids (HR, 2.67; 95% CI, 1.18 to 6.03), or above 90 mg of opioids (HR, 2.12; 95% CI, 1.09 to 4.13) had increases in the risks of delirium. We did not observe associations between anticholinergics and risk for delirium.

*Conclusion:* Exposure to opioids, corticosteroids, and benzodiazepines is independently associated with an increased risk of delirium in hospitalized cancer patients.

#### Comments

Strengths/uniqueness:

This is a well described report examining psychoactive medications as a risk factor for delirium, and builds on previous work with an improved methodology that avoids limitations of previous studies.

Weaknesses:

As acknowledged by the authors there is the ongoing difficulty of determining associations given the multiple exposure to more than one type of psychoactive medications.

Relevance to Palliative Care:

Once again this report confirms previous evidence that too many and too much of medications are often harmful to patients. Benzodiazepines are a common culprit, and increasing opioid and steroid doses is not always of benefit.