

Journal Watch- July 12, 2012

Glen Ming PGY-2 FM Resident

Article:

Prospective Study of Falls and Risk Factors for Falls in Adults With Advanced Cancer

Stone C, Lawlor P, Savva G, Bennett K, Kenny R. *Journal of Clinical Oncology*. June 2012. Volume 30, Number 17: 2128-2133.

Purpose: Retrospective studies of inpatients with cancer suggest that a cancer diagnosis confers a high risk of falls. In adults with advanced cancer, we aimed to prospectively document the incidence of falls, identify the risk factors, and determine if falls in this population occur predominantly in older patients.

Patients and Methods: Patients admitted consecutively to community and inpatient palliative care services with metastatic or locoregionally advanced cancer who were mobile without assistance were recruited. Risk-factor assessment was conducted on initial encounter. Patients underwent follow-up via weekly telephone contact for 6 months or until time of fall or death. Relationship between covariates and time to fall was examined using hazard ratios (HRs) derived from univariate and multivariate Cox proportional hazards models.

Results: Of 185 participants (52.4% men; mean age 68 ± standard deviation of 12.6 years), 50.3% fell; 35 (53%) of 66 participants age < 65 years and 58 (48.7%) of 119 age ≥ 65 years fell; 61.3% of falls occurred in the community; 42% resulted in injury. Median time to fall was 96 days (95% CI, 64.66 to 127.34). Primary brain tumor or brain metastasis (HR 2.5; P = .002), number of falls in the preceding 3 months (HR, 1.27; P = .005), severity of depression (HR, 1.12; P = .012), benzodiazepine dose (HR, 1.05; P = .004), and cancer-related pain (HR, 1.96; P = .024) were independently associated with time to fall in multivariate analysis.

Conclusion: Fifty percent of adults with advanced cancer, regardless of age, will experience a fall associated with high risk of physical injury. There is a compelling need to assess the efficacy of assessment and management of modifiable fall risk factors in patients with advanced cancer.

Strengths:

- Prospective study- best study design to examine predictors for fall. RCT not possible.
- Long term follow-up (up to 6 months or death) with weekly assessments for falls
- Baseline assessments based on comprehensive fall assessment detailed in Methods.
 - Included autonomic function test, physical characteristics test, functional mobility, sensory modality, medications (including opioids, benzodiazepines and corticosteroids), Palliative Performance Scale, ECS-CP, ESAS, incontinence questionnaire, previous falls
- Diverse population studied- age range and cancer types
- Identified statistically significant risk factors that increased risk for falls
- No conflict of interest

Weaknesses:

- Study limited to one hospital in Ireland (inpatient and outpatient)
- Excluded those that could not walk/stand independently, actively dying or considered too unwell, on continuous O2, aphasia, poor English
 - Can represent a large proportion of our patient population

- 693 of 1117 patients ineligible for study, only 185 studied (16.6%) although this is expected in palliative studies
- Study may have been too small to detect other risk factors such as sarcopenia, cachexia
- Did not assess delirium, patient may not remember fall

Relevance to Palliative Care:

Falls are common in the palliative population and can be a major cause for morbidity and reduced functional independence. As many as one in two advanced cancer patients can experience a fall within 6 months; therefore it is important to screen and correct for reversible risk factors. This would include assessing benzodiazepine use and cancer pain, especially in patients with brain mets, depression, or a history of previous falls.