Patient Safety Tip of the Week

June 9, 2015

Add This to Your Fall Risk Assessment

A new study of Medicare patients shows that having a diagnosis of **overactive bladder is a risk factor for falls** (Jayadevappa 2015). The investigators analyzed over 30,000 Medicare patients, using claims data from a random sample of 5% of the Medicare population between 2006 and 2009 and ICD diagnosis codes for overactive bladder (OAB), functional urinary incontinence, urinary incontinence, urinary frequency, urgency urination, nocturia, or stress urinary incontinence. After adjustment for several variables, the risk for falls in those with a diagnosis of overactive bladder was 1.30. The only other variable that was a stronger predictor of falls was a history of previous falls (odds ratio 1.7).

Those who received treatment for overactive bladder had a lower risk of falls compared to those not treated (OR 0.92). However, we recommend caution in jumping to a conclusion that treatment reduces fall risk. Only 10% of patients with a diagnosis of overactive bladder received treatment. The decision whether to use medications for overactive bladder likely takes into account multiple clinical factors that are unlikely to be accounted for in claims data.

We would add a few further words of caution about treatment. Not only are anticholinergic drugs a risk factor for delirium and cognitive impairment in the elderly, but anticholinergic drugs themselves are also a risk factor for falls (Rudolph 2008). And in our February 10, 2015 Patient Safety Tip of the Week "The Anticholinergic Burden and Dementia" we noted a study showing an association between anticholinergic burden and development of dementia (Gray 2015). In that study bladder antimuscarinic drugs were one of the top three categories of anticholinergic drugs prescribed. And even more recently a study has noted an association between anticholinergic drugs and pneumonia in community-dwelling patients age 65 and older (Paul 2015).

Actually, it should not really come as a surprise that an overactive bladder is a risk factor for falls. Is it biologically plausible that overactive bladder would be a risk factor for falls in the elderly? Certainly. Patients with overactive bladder might hurry when they get the urge to void, increasing their risk of tripping and falling. And if they have episodes of incontinence they risk falling from slippery surfaces. They also may get the urge to void at night, with increased risk of falling in poor lighting. A previous study (Vaughan 2010) had shown an association between nocturia and falls and patients with OAB symptoms are likely to have nocturia. And, while most patients have an "idiopathic" OAB, the symptoms of frequency, urgency and precipitate micturition are also seen with neurogenic bladder accompanying a host of neurological conditions, many of which are associated with motor or balance dysfunction that may also be fall risk factors.

In our December 22, 2009 Patient Safety Tip of the Week "Falls on Toileting Activities" we noted that almost half of falls in hospitals occur during activities related to toileting, most occurring when attempting to go from bed or chair to the bathroom or returning from the bathroom rather than when getting on or off the toilet. And, not surprisingly, most of those falls occur at night.

While poor lighting at night is a major contributor to falls, staffing levels during evenings and nights may also contribute. In our December 22, 2009 Patient Safety Tip of the Week "Falls on Toileting Activities" we noted a study showing that most falls related to toileting activities occurred in patients already labeled as being at high risk for falls (Tzeng 2010) and another study (Krauss et al 2008) showing poor staff compliance with toileting schedules, even during a period of a targeted intervention.

We suggested that perhaps the toileting needs of our patients might be better met by aides or staff other than nursing. Perhaps a specially-trained aide or team could work from 10 PM to midnight or 9 PM to 11 PM and just focus on ensuring all patients at high risk for falls get appropriate assistance toileting before they go to sleep. Keep in mind that such attention to toileting is also important in the patient at risk for delirium. Note that we have also mentioned the gender issue on several occasions. Many studies have identified male sex as a risk factor for falls. We don't know if that is due to macho vs. modesty. If it is the latter, then male patients may be hesitant to ask a female nurse to help them to the bathroom. So consider having some male aides on your "team" to assist male patients with toileting as well.

Patients with OAB symptoms, once they get the urge to void, often need to void right away. So it should be no surprise that an inpatient with OAB won't wait for a response to the nurse call button and will try to get to the bathroom by him/herself. So at least for male inpatients with OAB one should keep a hand-held urinal within reach at the bedside as long as they have the cognitive capacity to use it. Some females might also be able to utilize a bedpan by themselves before a nurse arrives for assistance.

So here are some of the things you should be doing to reduce the risk of falls in your patients who have symptoms of overactive bladder:

- Add overactive bladder symptoms to your fall risk assessment
- Make sure all patients know to ask for assistance when toileting at night
- Better lighting
- Use night lights or motion sensor lights near bathrooms
- Include toileting activities in hourly rounding
- Make sure those patients with OAB symptoms have the opportunity to toilet late in the evening
- Consider teams of staff other than nurses to address the toileting interventions

- Beware of late evening fluid intake in patients with OAB symptoms
- Hand-held urinal within reach at the beside at least for males
- Audit compliance with all your hourly rounding and fall-prevention strategies

Some of our prior columns related to falls:

- April 16, 2007 "Falls With Injury"
- July 17, 2007 "Falls in Patients on Coumadin or Heparin or Other Anticoagulants"
- January 1, 2008 "Fall Prevention"
- October 7, 2008 "Lessons from Falls....from Rehab Medicine"
- November 18, 2008 "Ticket to Ride: Checklist, Form, or Decision Scorecard?"
- August 4, 2009 "Faulty Fall Risk Assessments?"
- September 22, 2009 "Psychotropic Drugs and Falls in the SNF"
- December 22, 2009 "Falls on Toileting Activities"
- January 2010 "Falls in the Radiology Suite"
- June 2010 "Seeing Clearly a Common Sense Intervention"
- May 29, 2012 "Falls, Fractures, and Fatalities"
- June 5, 2012 "Minor Head Trauma in the Anticoagulated Patient".
- January 15, 2013 "Falls on Inpatient Psychiatry"
- March 2013 "Sedative/Hypnotics and Falls"
- December 3, 2013 "Reducing Harm from Falls on Inpatient Psychiatry"
- June 2014 "New Glasses and Fall Risk"
- July 8, 2014 "Update: Minor Head Trauma in the Anticoagulated Patient"
- August 2014 "Cataract Surgery and Falls"
- November 4, 2014 "Progress on Fall Prevention"
- March 2015 "Another Paradox: Falls Due to Walking Aids"

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