Introduction: Hip fractures in the elderly are common and associated with increased morbidity and mortality, particularly when surgery is not achieved within 48 hours. As a result, guidelines have been set to ensure surgical repair in 48 hours or less. Addressing co-morbidities in this population has been shown to be equally important. Thus a balance is required to identify patients who will benefit most from efficient preoperative optimization practices. The purpose of the current investigation was to identify those hip fracture patients with aortic stenosis (AS), and examine the practices surrounding their perioperative care.

Methods: Following institutional ethics board approval, we reviewed charts of all patients who underwent surgical hip repair at a mid-sized academic center during 2010. We documented the time from admission to surgery, the clinical description of any murmur, the echocardiographic results and/or prior diagnosis of AS, anesthetic technique, and postoperative complications.

Results: Charts of 220 patients were reviewed. In total, 63 patients (29%) had a documented murmur. Of these, 29 (46%) received an echocardiogram on current admission. The echocardiogram was associated with a delay to surgery (2.6 days versus 1.5 days; p =0.05) but served to diagnose new moderate to severe AS in 6 cases (21%). In total, AS was identified in 26 patients (13%). Of those with AS, 69% (n=18/26) were given general anesthesia compared to 38% of non-AS patients (n=74/194). 8% of patients with AS (n=2) were postoperatively admitted to the ICU compared to 5% of patients without AS (n=9). In-hospital mortality was elevated in AS patients (15%, n=4)) compared to (5%, n=10) of those without AS.

Discussion: Our study describes the prevalence of AS in elderly hip fracture patients. These findings may have important implications for perioperative management of this patient population. Further prospective investigations may be warranted to determine the costs & benefits of instituting standardized perioperative guidelines incorporating both early anesthesia assessment and focused echocardiographic studies to facilitate the timely management of this complex patient population.

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