

Fall hazards in the homes of individuals with glaucoma

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Purpose: Glaucoma is associated with an increased risk for falls, and the majority of falls occur in or near the home. Here, we characterize the most common fall hazards in the homes of older individuals with diagnosed or suspected glaucoma.

Methods: Patients aged 60 years or older receiving care for diagnosed or suspected glaucoma were recruited and underwent a fall risk home assessment by a single evaluator. Seventy-four hazards in up to eight areas of the home (total of 194 items) were evaluated in the entry way, living room, dining room, kitchen, bedroom, bathroom, stairs, and hallway. Rooms were only evaluated if used by the participant for at least one hour daily. Linear regression models were used to examine the relationship between observed hazards and visual field (VF); covariates included age, sex, race, and whether or not the patient lives alone.

Results: Mean age among the 174 participants was 71 years (SD=7.6), and average sensitivity in the integrated visual field was 26.2 dB (SD=5.7; range=3.1–33.8). The majority of participants were Caucasian (61%) and male (54%). The 174 dwellings assessed included 141 (81%) houses and 33 (19%) apartments. An average of 7 (SD=0.8) rooms were assessed per home. The mean number of items graded in each home was 132 (SD=18), and 33.6% were identified as hazards (mean=44). The greatest numbers of observed hazards were found in the bathroom (mean=10.5, SD=2.5), stairs (mean=8.4, SD=1.9), and entry way (mean=7.2, SD=4.0). Common items that were graded and identified as hazards included low ambient light (100%), inadequate number of handrails (87%), absence of bathmat or non-skid strips in the bathtub/shower (86%), absence of grab bars in the bathtub/shower (79%), and hazardous rugs (unsecured or curled edges; 75%). Lower VF sensitivity was not associated with the overall number of home hazards, number of hazards in any given room, frequency of hazards among graded items, or frequency of hazards within any type of room ($p>0.05$).

Conclusions: Multiple home fall hazards were identified in the study population, and the majority of hazards could be easily addressed via fall prevention efforts in high-risk individuals. Hazard frequency did not vary by severity of visual field impairment, suggesting that individuals with more advanced glaucoma do not adapt their homes for safety.