

Special Article - Older Adults

Visual Impairment in Patients Presenting with a Fall and a Non-Hip Fragility Fracture

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Introduction

In the UK, there are approximately 536,000 new fragility fractures each year, comprising 79,000 hip fractures, 66,000 clinically diagnosed vertebral fractures, 69,000 forearm fractures and 322,000 other fractures [1]. Visual impairment is one of the major risk factors contributing to the risk of falling. Both central and peripheral visual impairment have been shown to be significantly associated with falls and hip fractures [2,3]. Approximately 2/3rd of hip fracture patients have some form of visual impairment, of which over half of these are correctable due to cataracts and/or uncorrected refractive errors [4-5].

The prevalence of visual impairment in those presenting with a non-hip fragility fracture following a falls is unknown.

Methods

Patients aged 65 years attending for a bone density scan, as part of their osteoporosis risk assessment, following a low trauma, non-hip fragility fracture from standing height or less were invited to take part in the study. Following informed consent, participants underwent an ocular history and vision assessment.

74 eligible patients were sent an invitation to participate in the study. Of these: 7 did not attend the bone density scan appointment, 5 declined to take part, 8 changed their appointment time or cancelled, 33 were unable to be recruited due to various logistical problems. Recruitment opportunities were also missed due to late

hospital ambulance transport, difficulty in parking at the hospital, rescheduling of bone density scan appointments and bone density scans not running to booked appointment time.

Results

35 participants were recruited into the study (1 excluded at a later date and 1 incomplete data). Complete data was available in 33 participants. The mean age (SD) of patients was 74.9 (6.1) years. Five participants were male and the remaining female. All were of Caucasian origin. 13 of the 33 participants had a past history of eye problems (known diabetic eye disease 4, glaucoma 1, macular degeneration 2, previous eye surgery 6).

18 of the 33 participants felt they had some problem with their vision, and 25 of the 33 had seen an optician within the last 12 months either due to ongoing eye care or annual review. All 33 participants wore prescription glasses, 50% varifocals and all participants wore their glasses for their vision assessments. Two participants wore an old prescription of glasses as they had been broken in the fall.

Fifteen (46%) of the participants had normal visual acuity and had seen an optician in the last 12 months, 4 (12%) had normal visual acuity and had not seen an optician in the last 12 months, 9 (27%) had reduced visual acuity but had seen an optician within the last 12 months and 5 (15%) had reduced visual acuity but had not seen an optician within the last 12 months.

Of those with reduced visual acuity (14), 8/14 (57%) has correctable acuity with pinhole, which indicates the need for a new glasses prescription or screen for cataracts. There was no incidence of pupil problems, visual field defects or positive red reflex in any of the participants.

Conclusion

Based from the result of the study, it appears that most of the participants had seen an optician within the last 12 months. All patients remembered to bring their glasses when they attended hospital and added that they had got a new pair as they broke them in the fall, or were waiting on a new pair and so had an old pair on. Of those with reduced visual acuity, 57% had correctable acuity and therefore would benefit from further specialist visual assessment. Routine vision assessment is important post fracture assessment.

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