Improving the assessment and management of osteoporosis and fracture risk in patients with neurodegenerative Parkinsonism

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Background and Aims

Falls occur frequently in neurodegenerative Parkinsonism with up to 50 percent of patients with Parkinson's Disease (PD) falling over a three month period1. PD itself constitutes an independent risk factor for osteoporosis2,3 and is associated with an excess risk of fracture4.

The 2015 Parkinson's UK Audit highlighted bone health management as an area for improvement and the SIGN osteoporosis guideline recommends assessing fracture risk using QFracture in patients with risk factors.

Aims:

This project aims to standardise the clinical assessment of patients with Parkinsonism with regular falls and bone health risk assessment. This may thereby reduce the risk of falls and fracture and enable our patients to live longer, healthier lives at home.

Methodology

A retrospective study was conducted at the Queen Elizabeth University Hospital in November 2017. 150 patients attending Movement Disorder clinics in Glasgow were identified. Data were collated on demographics, Parkinsonism diagnosis, co-morbidities and pharmacotherapy, and the 10 year hip fracture risk calculated using QFracture.

Results

The final analysis included 100 patients, comprising 38 females and 62 males, with a mean age of 75.7 years.

The mean 10 year fracture risk was 46.8 percent. Using the fracture risk threshold of 10 percent suggested by SIGN, 68 percent satisfied criteria for DXA. DXA scans, however, were only requested or performed for 20 percent, highlighting this as an area for improvement.

To address this, a standardised clinic proforma with sections on falls and fracture risk was introduced and tested in a second PDSA cycle in a cohort comprising fourteen patients with neurodegenerative Parkinsonism.

A significant improvement in falls documentation and assessment of fracture risk was observed in the second PDSA cycle: 100 percent of the cohort had their falls status assessed and a QFracture score was recorded at clinic for all patients. 35.7 percent of the cohort reported sustaining falls since their last clinic review. DXA imaging was indicated for 57.1 percent of the cohort. 21.4 percent of the patients in whom DXA was indicated had already undergone testing and it was requested and awaited for 35.7 percent. Bone protection was prescribed for 42.9 percent of the cohort. Although limited by a small sample size, this second PDSA cycle highlights that the improved use of DXA imaging has optimised bone health management.

Figure 2: chart displaying the incidence of idiopathic Parkinson's disease and Parkinson Plus conditions in our patient cohort

References


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