

to 2017 (97% vs 76%, respectively). Similar findings were noted for patients with atrial fibrillation who received oral anticoagulants on discharge (90% vs 50%) and patients discharged on antihypertensives (95% vs 80%).

Conclusion Use of a clinical support platform in managing acute stroke is an intervention that improves stroke care.

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037 FRONTOTEMPORAL DEMENTIA OR FRONTAL VARIANT ALZHEIMER'S DISEASE? A CASE SERIES

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Introduction Accurate prediction of the underlying neuropathology in behavioural variant frontotemporal dementia (bvFTD) is essential for future targeted therapy trials and prognostication. Alzheimer's disease (AD) pathology has been reported in a significant proportion of patients with clinical bvFTD. We sought to determine whether detailed clinical and neuroradiological assessment was sufficient to distinguish bvFTD with AD pathology from bvFTD with frontotemporal lobar degeneration (FTLD).

Methods Two patients with clinically diagnosed probable bvFTD but AD pathology at autopsy, were identified. The clinical, neuropsychological and imaging features of these patients were compared with those of ten patients with clinically probable bvFTD and proven FTLD pathology (tau, TDP-43, FUS).

Results Both patients with AD pathology presented with behavioural symptoms typical of bvFTD as well as memory impairment. Executive function, memory and visuospatial skills were impaired in both pathologic groups. Language skills were relatively spared in those with AD pathology. Neuropsychiatric symptoms were frequent in both groups but significant depression and anxiety were seen only in those with FTLD pathology. Dementia severity and caregiver burden were similar. The degree or topographical distribution of atrophy on MRI did not differ.

Conclusions Alzheimer's pathology may cause bvFTD symptoms which are otherwise indistinguishable to those caused by FTLD pathology. While there may be subtle differences in patterns of cognitive deficits, standard neuropsychological testing is insufficient to discern the underlying pathology.

Similarly, structural imaging cannot be used to reliably identify AD pathology. Better access to amyloid biomarkers may be needed to more accurately define bvFTD caused by AD pathology.

038 TREMOR: A CLINICAL AND NEUROPHYSIOLOGICAL STUDY

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Introduction Tremor is a common clinical problem seen in a number of diseases. Robust classification and diagnosis of tremor remains controversial due to overlap in clinical features and lack of established biomarkers. This hampers effective research including therapeutic trials. We present our research protocol for a cross-sectional study which aims to find more robust methods of tremor classification and diagnosis.

Methods Adults with upper limb tremor of varying aetiologies, diagnosed using current clinical criteria (including essential tremor, Parkinsonian tremor, and dystonic tremor), and age-matched controls are eligible for recruitment. Participants undergo a clinical and neurophysiological assessment, including accelerometry, surface electromyography, long-latency stretch reflexes, temporal discrimination, and tonic vibration reflexes. Data will be analysed using a cluster analysis to identify robust tremor syndromes and biomarkers associated with them. We aim to recruit 100 participants prior to analysis.

Results At time of writing, 13 participants with upper limb tremor have been studied (6 with essential tremor, 5 with dystonic tremor, and 2 with indeterminate tremor; mean age 66 years, range 18–85). Participants tolerated the clinical and neurophysiological studies well with 100% completion rate after recruitment. With current rates of recruitment we anticipate completion of recruitment and commencement of data analysis in October 2019.

Conclusions Our protocol aims to identify robust tremor phenotypes and biomarkers for them. This will allow patients with tremor to be classified into more biologically homogeneous diagnostic categories, aiding future research into the mechanism of tremor and more rational clinical trial design.

039 ESTIMATING THE HEALTH AND ECONOMIC BURDEN OF INVESTIGATING TUMEFACTIVE DEMYELINATION COMPARED TO CONVENTIONAL MULTIPLE SCLEROSIS

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Introduction Tumefactive demyelinating lesions, defined as demyelinating lesions > 2cm in diameter, occur most commonly in association with multiple sclerosis (MS), and can pose a diagnostic challenge. The aim of this study was to