Dr A. Scholes BA(Hons) Dpsych(Clin. Neuro.) APS CCN

Specialist Endorsement PBA

February 7th 2011

Dear Dr P,

Thank you for referring Mr M A for a review neuropsychological assessment. He was last seen in May 2010 following concerns in relation to his memory and associated anxiety.

At the time of his prior assessment, Mr A had undergone Memory clinic, neurological and neuroimaging assessments which had provided variable results. You raised concerns due to a PET scan reporting evidence of features consistent with Alzheimer's or Lewy Body dementia (LBD).

Neuropsychological assessment that I carried out with Mr A in 2010 revealed performances that were out of keeping with expectations, given Mr A's high achieving background and level of responsibility in defence force engineering. In particular, he had difficulty with visuoconstructional tasks, spatial organisational skills and other executive difficulties. His memory performances were severely impaired, although it was noted that he was particularly anxious during those activities. Whilst Mr A was demonstrably anxious during that assessment, his performance pattern was not readily explained by this, and it was thought best to monitor his functioning and place him on a trial of Aricept.

Since that time he has been commenced on Aricept under your care, and he has retired from his demanding engineering position. He described filling his days with walks, home maintenance, and education including internet searches and he plans to attend seminars on engineering. He said he has occasionally been asked to provide consultancy to his prior workplace, and he had plans to build his own solar panel system. He described his mood as positive and his health as good. However, his provision of a history was scant as he would go off on tangents and was difficult to pin down to gain direct answers. There was an emptiness and repetitive quality to his speech.

Review assessment was carried out on 24th January 2011 and in broad terms the results did not show much statistically significant decline since initial testing. However, neither has Mr A shown improvement, and there were some indications of mild change. However, he reported that he is not noting any concerns, unless he becomes stressed at which time his memory becomes unreliable.

Results and Observations

Abstract verbal reasoning remained sound (albeit below what would be typical for his level of education/employment), with Mr A performing in the average range. In addition, his visuospatial skills remained well below premorbid expectations, with him continuing to perform in the low

average range across measures of constructional skill and visual problem solving, and visual attention t o detail.

Immediate auditory attention span was statistically lower than in 2010, with Mr A declining from an average range performance overall, down to low average range. He showed a digits forwards span of only 4 digits reliably and 5 unreliably, and he had marked difficulty when required to reverse the digit sequence using his working memory (3 digits backwards reliably).

Following on from this, Mr A continued to show severe memory impairment. His immediate and delayed recall in the form of stories was in the borderline range, as was his word list learning performance. Notably, he perseverated during the list learning task, by providing words that had been in the previous story recall activity. He did not notice this error and continued to make it despite feedback. He did not benefit from repetition, and he could not recall any of the list words following a delay. He provided words that had not been in the list. He made a better attempt at the recognition trial on this occasion, but his performance was still poor and seemingly random at times.

Processing speed was slow on a sequencing task (extremely low range), but his output speed was good on a simple motor measure (high average range).

Confrontational naming was found to be in the average range (not previously assessed).

In regard to executive functioning, qualitatively, Mr A was again observed to be perseverative at times, and he did not seem aware of this, which suggested that this is not likely to be anxious repetition. His performance on a complex drawing/copying tasks was also slightly more impaired than in 2010. He was more disorganised in his approach and the resulting picture was somewhat distorted. He again did not seem aware of this. His recall of the picture was markedly impoverished (<10^{th} %ile). Verbal fluency remained on par with the 2010 result but he made many repetition errors on this occasion, seeming to have difficulty monitoring his performance. In addition, the trail making test was given and Mr A made several set shifting errors, indicating reduced mental flexibility.

Conclusions and recommendations

In summary, some mild areas of decline as well as qualitative indications of increased perseveration and disorganisation were apparent on review, but overall results remained largely in keeping with 2010 findings. There were no areas of improvement. Mr A seemed less anxious at this recent assessment – although he still appeared stressed during memory tasks. His affect was otherwise reactive and he described maintaining an active lifestyle despite retirement. He seemed content with retirement and continued to keep himself physically and mentally active according to his self-report. He did state that his wife tells him that he needs to do more however. He did not come across as depressed and said that his memory difficulties were not impacting in anyway. He felt that they only occurred if he allowed himself to become overwhelmed or stressed. In effect, he seemed to find the testing of his memory somewhat confronting. His insight on other tasks seemed reduced.

Although there is not compelling evidence for a progressive basis to Mr A's difficulties at this point in time, given that his difficulties continue despite a reduction in work related demands and seemingly more relaxed demeanour - overall a neurological cause remains the most likely diagnosis. The Aricept may be helping to slow progression. However, it would be important to gain review

neuroimaging and to continue to monitor his cognitive functioning over time before making a firm diagnosis. The pattern of memory dysfunction together with his notable visuoconstructional difficulties, albeit with some executive dysfunction is most consistent with an Alzheimer's type dementia. There does not seem to be any clinical support for a diagnosis of LBD and his memory profile is not typical of this. It should also be noted that he has lost a significant amount of weight since his last assessment, therefore, medical review – with consideration of a possible malignancy causing a paraneoplastic syndrome would be worth ruling out if not already done so.

Relaxation strategies were discussed with Mr A, given his self-report of stress increasing his difficulties. He noted that he had used this in the past to manage his stutter. Some additional cognitive strategies will be provided to him following on from these results.

Please contact me if you wish to discuss the findings or to make a future referral.

Kind regards

Dr Amy Scholes

Senior Clinical Neuropsychologist

Paediatric and Adult