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Cognitive function in adult post-transplant patients with cystic fibrosis (CF) compared to non-transplant patients with CF and healthy controls

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**Objectives:** People with cystic fibrosis (CF) show some degree of cognitive impairment compared to healthy controls; those who have CF related diabetes (CFRD) show greater impairment than non-diabetics. Transplantation can cause changes in cognitive function. This study aimed to investigate cognitive function in post-transplant patients with CF compared to patients with CF who had not received a transplant and healthy controls.

**Methods:** Cognitive function was assessed using the Cambridge Neuropsychological Test Automated Battery (CANTAB). 63 pancreatic insufficient patients were recruited from the Leeds Adult CF Unit; 21 post-transplant recipients and 42 (21 with insulin treated CFRD, 21 with a normal oral glucose tolerance test) non-transplant patients. 21 healthy controls were recruited from the general population. Groups were matched as closely as possible for age, gender and education level.

**Results:** Of the 21 post-transplant patients, 18 had diabetes, 20 were lung transplant recipients and median time since transplantation was 8.9 years. Post-transplant patients performed significantly worse than controls on tests of sustained attention and working memory but as well as controls on visual memory and mental flexibility. Although there were no significant differences in performance between CF groups on tests of verbal, visual, and working memory respectively, mental flexibility and sustained attention, post-transplant patients tended to be worse than non-diabetics, and similar or better than patients with

CFRD.

Conclusion: Post-transplant patients show some degree of cognitive impairment similar to patients with CF who have not undergone transplantation.

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