374 Clinical correlates of anxiety in adult CF patients

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Background: Anxiety and depression are prevalent in patients with chronic illness, but there are limited data in adults with CF. This study draws on a sub-set of data collected for the UK arm of the International Depression & Anxiety Epidemiological Study (TIDES) together with additional clinical data. Our aim was to explore the relationship between clinical variables and anxiety in order to identify significant correlates with anxiety in adult CF patients.
Methods: Data were collected from CF patients at the West Midlands Adult CF Centre using the Hospital Anxiety and Depression Scale (HADS) plus clinical data including age, sex, BMI, spirometry, history of haemoptysis. These variables were entered into the regression model. We intended to include use of IV antibiotics and recent diagnosis of diabetes as additional variables however, there was insufficient variability within our sample to conform to the requirements for regression analysis.
Results: 139 patients took part (78 male), mean age 28 yrs, mean FEV1 64 predicted, mean BMI 22.7 kg/m^2. 38.9% of participants had clinically significant anxiety scores. The distribution of variables was checked for assumptions for regression analysis. The significant variables were FEV1% predicted (poorer lung function associated with higher anxiety), BMI (higher BMI associated with higher anxiety) and haemoptysis (higher anxiety scores for those with recent haemoptysis). This regression model only accounted for 16.8% of variance in anxiety.
Discussion: The association of poor lung function and recent haemoptysis with high anxiety is not surprising, however the relationship with higher BMI and anxiety is unexpected.

375 Depression and anxiety in cystic fibrosis: relation with quality of life

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Introduction: Patients with CF may have a high prevalence of depression and anxiety, which can affect their quality of life (QoL).
Objective: To assess QoL in a group of adult CF patients and its relation with symptoms of depression and anxiety.
Methods: The St George's respiratory questionnaire (SGRQ), the CF Questionnaire Revised for adolescent and adults (CFQR-14+), the Hospital Anxiety and Depression Scale (HADS) and the Center for Epidemiological Studies-Depression Scale (CES-D) were administered. Data were collected on clinical, nutritional, respiratory function, HRCT and laboratory parameters.
Results: The questionnaires were completed by 43 patients; 33.3% were classified as depressive (CES-D), 21.7% had depression symptoms (HADS-D) and 31.5% had anxiety symptoms (HADS-A). Significant positive correlations were found between depression and anxiety and all the CRSG scales; and negative correlations with all the CFQR-14+ items. The patients with a positive screening for depression and/or anxiety had significantly higher scores than those patients without depression or anxiety with all the CRSG scales and lower scores for almost all the CFQR-14+ items. Patients with depression and/or anxiety and FEV1(%) $\geqslant$ 50% had a significantly worse quality of life than those who had a negative screening but with FEV1(%) $<$ 50%, in almost all the items.
Conclusions:

1. Patients with CF from our sample had an increased prevalence of symptoms of depression and anxiety, similar to other series.
2. Patients with CF and symptoms of depression and/or anxiety had a worse QoL, as measured by CRSG and CFQR-14+, than CF patients without these symptoms, regardless of their pulmonary function.

376 Acceptance in adolescents with cystic fibrosis: a prospective study

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Background: Research demonstrated that individuals with cystic fibrosis are at increased risk for psychological difficulties. As these psychological outcomes can vary considerably across affected individuals, it is necessary to identify factors that are associated with these differences in outcome.
Objectives: This study prospectively investigated the role of acceptance in relation to self-reported anxiety and depression in adolescents with CF. It was hypothesized that greater acceptance would be related to less anxiety and depression, whilst controlling for illness severity (FEV_1% predicted).
Methods: Forty adolescents with CF (23 boys, 17 girls; 14–22 years) participated. Anxiety and depression were assessed using the Hospital Anxiety and Depression Scale (HADS). Acceptance was assessed with the Illness Cognition Questionnaire (Time 1). After 6 months the HADS was reassessed (Time 2).
Results: Hierarchical regression analyses were performed to examine the role of acceptance in anxiety and depression. Whilst controlling for illness severity, greater acceptance at Time 1 was related to lower anxiety and depression at Time 1, as well as lower depression at Time 2.
Conclusions: Results suggest that acceptance

a. should be taken into account in the multidisciplinary treatment of those individuals with cystic fibrosis who exhibit psychological difficulties, and
b. can be important in the prevention of depression. Addressing depression might also have indirect positive effects on health outcomes, as depression relates to poorer disease management.

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377 Can coping predict survival in adults with cystic fbrosis? A preliminary investigation

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Background: Advances in the management of cystic fibrosis (CF) have led to a significant improvement in survival although marked differences between individuals are still observed. It is unknown whether the ways in which adults with CF cope predict survival.
Methods: Between June and September 1999 a consecutive series of 116 patients were recruited to evaluate the Cystic Fibrosis Coping Questionnaire. Demographic (age, gender), clinical (FEV_1% predicted, BMI, diabetes, *B. Cepacia complex*, intravenous access device, nutritional and lung transplant status) and coping variables (optimism, distraction) were recorded. Kaplan-Meier methods and Cox proportional hazards models examined associations between coping and survival.
Results: At the census date (31st December 2009) 86 adults were alive, 28 had died and two were lost to follow-up. Initial analyses suggested a statistically significant association between optimism and survival. However, it is known that several variables, notably disease severity, predict survival and when these are suitably modelled the apparent association between optimism and survival becomes doubtful. Furthermore, any association in the initial analyses became unclear after the removal of the seven patients with *B. Cepacia complex*.
Conclusions: This work illustrates the importance of careful modelling on suitable data sets taking account of known prognostic variables. The fact that we did not find a statistically significant association does not mean that there is no real association between coping and survival. Appropriate testing would require a large sample with a high number of deaths.