317 Depression, anxiety and quality of life in adolescents with cystic fibrosis

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Objectives: It has been shown that a chronic disease involves a significant risk for developing depression and anxiety symptoms. The impact of anxiety and depression on quality of life is well known in adults but not among adolescents. The aim of the study is to estimate the prevalence of depression and anxiety in adolescents with CF and to describe their health-related quality of life.

Methods: 26 patients, age 12 to 17 were recruited. Mean age 15. Participants completed the Hospital Anxiety and Depression Scale (HADS) including 14 items on a Likkert scale (cut off mild = 7, severe = 10) and the Cystic Fibrosis Quality of Life Questionnaire (CFQ-R) (8 sub-domains in proportions of 100%).

Results: HADS shows a depression mean of 2 (range 0–15) and an anxiety mean of 4 (range 0–11). The CFQ-R sub-domains means: physical 88% (range 42–100), emotional state 79% (range 46–100), social 78% (range 44–100), body image 82% (range 44–100), eating 86% (range 22–100), treatment burden 63% (range 0–89), respiratory 76% (range 50–100), digestion 74% (range 33–100).

Conclusions: Anxiety and depressive symptoms are not very common among CF adolescents at Stockholm CF-center but there are some patients that suffer from both depression and anxiety. The symptoms of anxiety appears to occur to a greater extent than depression. Among the domains of CF quality of life the treatment burden was the most troubling. A routine screening for symptoms of anxiety, depression and health-related quality of life is important in the prevention of mental illness. Those identified with elevated clinical symptoms need appropriate treatment.

318 Prevalence and impact of anxiety and depression symptoms in adolescents and adults with cystic fibrosis in Spain

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Individuals with chronic conditions, such as cystic fibrosis (CF), are at increased risk for symptoms of anxiety and depression. These symptoms have been linked to worse adherence and worse health outcomes. However, little is known about the prevalence and impact of these symptoms on patients with CF in Spain. The aim of this study was to measure the prevalence of these symptoms at several centers in Spain.

Methods: A representative sample of Spanish patients with CF (N = 439; 51.94% men; age range: 12–80 years) completed the Hospital Anxiety and Depression Scale (HADS) and the Center for Epidemiologic Studies Depression Scale (CES-D). Clinical and demographic data were collected from their charts.

Results: A high percentage of patients scored over the clinical cut-off on both scales (CES-D: 28.92%; HADS depression 10.93%; HADS anxiety: 27.56%). Women had higher anxiety scores and younger patients reported fewer symptoms of anxiety and depression than older patients. Recent episodes of hemoptysis or pneumothorax, IV treatment, or listing for lung transplantation predicted higher depression scores. Patients with less education, pancreatic sufficiency and better adherence reported more symptoms of anxiety.

Conclusions: Significant elevations in depression and anxiety were found in patients with CF in Spain and were associated with clinical outcomes. Although quite common, only 24.4% of patients with these elevations were receiving psychological or pharmacological treatment. Annual screening of symptoms of anxiety and depression should be performed, with appropriate referrals for those at risk.

319 Anxiety and depression symptoms in caregivers of children and adolescents with cystic fibrosis in Spain

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Caregivers of children and adolescents with chronic illnesses are at higher risk for symptoms of depression and anxiety. Our aim was to evaluate the prevalence of these symptoms in parent caregivers of children and adolescents with cystic fibrosis (CF) in Spain.

Methods: 276 parents of 250 children with CF ages 0–17 completed the Hospital Anxiety Depression Scale (HADS) and the Center for Epidemiologic Studies Depression Scale (CES-D). Clinical and demographic data were collected from patients' clinical charts.

Results: High rates of depression and anxiety were reported by caregivers: CES-D: 53.98%; HADS Depression: 32.60%; HADS Anxiety: 61.59%. Caregivers of children younger vs. older than 12 reported more symptoms of depression and anxiety and mothers reported more symptoms than fathers. Symptoms of both depression and anxiety were more elevated in caregivers whose children recently received intravenous antibiotics or were listed for transplantation. Higher symptom scores were also associated with an increased number of hospitalizations and pulmonary exacerbations in the last year. Depressive symptoms were related to enteral feeding and patient's receipt of psychotherapy. Symptoms of anxiety were significantly associated with a recent diagnosis of CF-related diabetes.

Conclusions: Despite the large percentages of caregivers endorsing these psychological symptoms, only 18% received treatment. To prevent elevations in depression and anxiety and their consequences for patients' disease management and health outcomes, annual screening should be performed, with appropriate referrals for parents with elevated risk factors or symptoms.

320 Predictors of depression and anxiety in Belgian patients with CF: A cross-sectional study

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Objectives: Anxiety (A) and depression (D) are the most common neuropsychiatric features in patients with CF. The purpose of this study is to characterize the psychological status of patients with CF, and to investigate the relationship between these psychological characteristics with clinical factors.

Methods: Participants included 409 patients with CF (aged 12–69) who completed structured questionnaires assessing respondent characteristics [socioeconomic status (SES), age] and well-being (HADS; CES-D). Variables with clinical data (patients with a Port-A-Cath, intravenous antibiotic treatment and severe lung function) were analyzed with multiple regression.

Table: Multiple regression analysis predicting D & A

		B(D)	$SE\ B$(D)	β (D)	B(A)	$SE\ B$(A)	β (A)
Step 1	constant	4.25	1.30		4.37	0.47	
	age	0.27	0.05	0.28***	0.08	0.02	0.22***
Step 2	constant	1.10	1.43		3.89	0.52	
	age	0.26	0.05	0.26***	0.08	0.02	0.21***
	SES	0.80	1.17	0.22***	0.13	0.06	0.10*
Step 3	constant	0.72	1.45		3.79	0.54	
	age	0.25	0.05	0.25***	0.07	0.02	0.20***
	SES	0.75	0.17	0.21***	0.13	0.06	0.10*
	PAC/IV-antibiotics	1.46/1.69	1.43/1.02	0.05/0.06	0.13/0.36	0.55/0.39	0.01/0.05

Note $R^2 = 0.08$ for Step 1 (D); $\Delta R^2 = 0.05$ for Step 2 (ps < 0.001); $\Delta R^2 = 0.01$ for Step 3; $R^2 = 0.05$ for Step 1 (A); $\Delta R^2 = 0.01$ for Step 2 (ps < 0.05); $\Delta R^2 = 0.003$ for Step 3; *$p < 0.05$; ***$p < 0.001$.

Conclusion: The results showed that 15.3% of all patients were depressed and 33.3% of all patients were anxious as measured on the HADS, regardless of the cutoff criteria. This study presents evidence that anxiety and depression are independently associated with age and SES but neither anxiety nor depression were associated with clinical predictors.