Kidney stones and renal failure are more common in patients with CF compared to general population. Hyperoxaluria caused by fat malabsorption and the lack of intestinal oxalate degrading bacteria Oxalobacter formigenes is known in CF patients. Hyperoxaluria-induced crystal formation is associated with kidney stones and renal failure. However data concerning detection of crystals in CF patients are lacking in the literature. We conducted a prospective study in Pneumology Center, Foch Hospital, during 8 months.

Forty cystic fibrosis adult patients were enrolled to have a sample spot urine test on the first morning micturition. Median age was 29 years-old (range 20–55). Sixteen patients were pulmonary transplanted. Thirty-eight (95%) and 24 (61%) patients had exocrine and endocrine pancreas insufficiency, respectively. Three patients had glomerulonephropathy (2 diabetic nephropathy and 1 amyloidosis). The median plasmatic creatinine was 69 μmol/l (range 39–400 μmol/l). Factors for crystals formation were researched. Thirty-five percent of patients (13/40) had hypercalciuria (>3.5 mmol/l), 60% (24/40) had hypocitraturia (<0.3 mmol/l) and 72% (28/40) had hyperoxaluria (>0.3 mmol/l). Crystaluria was present in 30 percent (12/40). All crystals were made of calcium and oxalate. All five patients who had symptomatic kidney stones had positive crystalluria. Systematic screening of urine crystals should be of benefit in this population. Efficient therapeutic measures could be started easily to prevent kidney stone formation and crystal nephropathy.

**Hypothesis:**

FA levels may also be different in mild CF patients with and without small airway disease (SAD).

**Methods:**

In our study we examined 27 patients (6–55 years of age) with mild CF (FEV1 >75%) and 15 control subjects (7–23 years of age). Patients were assigned to two groups according to SAD defined as MEF25 <50%: Group 1 without SAD (n=18) and Group 2 with SAD (n=9). Induced sputum and blood status of FAs (EPA, DHA, AA) were analyzed by tandem mass spectroscopy.

**Results:**

As expected, trapped air (RV/TLC) was significantly increased in patients with SAD only (RV/TLC: control 84.75% vs. Group 1 109.3% vs. Group 2 158.50%, p <0.005) and sputum neutrophils were elevated compared to controls but not significantly different within patient groups (neutrophils: control 2%, Group 1 18%, Group 2 35%, p <0.01). Levels of AA and EPA were not altered, whereas DHA was significantly lower in CF (DHA: control 45.0 mg/l vs. Group 1 32.7 mg/l vs. Group 2 30.0 mg/l, p <0.001). DHA was not different between patient groups.

**Conclusion:**

Our study showed that DHA plasma levels were significantly reduced and neutrophilic inflammation increased in mild CF. Inflammation and DHA disturbance was not aggravated in patients with SAD most likely due to the small patient sample studied.

**Background:**

It has been shown that patients with cystic fibrosis (CF) have impaired fatty acid (FA) metabolism and decreased levels of DHA in plasma.

**Hypothesis:**

FA levels may also be different in mild CF patients with and without small airway disease (SAD).

**Methods:**

In our study we examined 27 patients (6–55 years of age) with mild CF (FEV1 >75%) and 15 control subjects (7–23 years of age). Patients were assigned to two groups according to SAD defined as MEF25 <50%: Group 1 without SAD (n=18) and Group 2 with SAD (n=9). Induced sputum and blood status of FAs (EPA, DHA, AA) were analyzed by tandem mass spectroscopy.

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Our study showed that DHA plasma levels were significantly reduced and neutrophilic inflammation increased in mild CF. Inflammation and DHA disturbance was not aggravated in patients with SAD most likely due to the small patient sample studied.