Background Cystic fibrosis patients are predisposed to pulmonary infections. Conditions associated with CF, like underweight, diabetes mellitus (CFRD), liver disease (CFLD) are favouring factors for tuberculosis (TB). The hypothesis of a potential comorbidity of TB in CF children occurred. The aim of the paper was to evaluate the prevalence of TB in children with complicated CF.

Methods Thirty-two patients (pts) with typical CF, associating complication like CFLD (27 pts), diabetes (3 pts) and 2 with both complication were considered for a prospective five years study. Biannual bacteriologic exam (TB specific also) were included, in addition to clinical examination and annual CT, to the patients evaluation.

Results Tuberculosis occurred in 6.25% (2 patients), both F508 del homozygous, with CFLD and poor nutritional status; one patient had also CFRD. His evolution was unfavourable; he developed portal hypertension and died from respiratory failure. The other patient was diagnosed with active TB, Pseudomonas positive and poor nutritional status, but good evolution after treatment. The rest of CFLD patients had a stationary evolution, except 4 of them (15.38%) developed diabetes. Tuberculin skin test was positive in 4 patients (12.5%), 3 of them received TB vaccine. Despite the mandatory vaccination for TB in our country, only 84% pts were vaccinated. 18.75% of patients (6 pts) were considered and treated as TB cases, without bacteriological confirmation, before being diagnosed with CF.

Conclusion Although TB is a frequent condition in our area, the prevalence among CF children is not as high as expected. It is possible that other factors, unknown so far, are implicated.

Methods Exposure to amongst others dichlorodiphenyldichloroethylene (DDE), perfluorooctanesulfonic acid (PFOS), and perfluorooctanoic acid (PFOA) was determined in cord plasma or breast milk, and information on T4 levels in heel prick blood spots was obtained through the Dutch neonatal screening programme. Linear regression models were composed for each compound and T4. Models were stratified for gender and adjusted for a priori defined covariates.

Results Mean T4 level was 86.9 nmol/L (n = 83). Girls in Q4 of DDE and PFOA exposure showed an increased T4 level compared to Q1, a difference which remained significant in the fully adjusted model (DDE ≥ 110.01 ng/L, +22.2 nmol/L, 95% CI 1.37, 43.04; PFOA ≥ 1201 ng/L, +30.7 nmol/L, 95% CI 13.38, 48.05). In boys a lower T4 level was seen in Q2 for both PFOS and PFOA, however after adjusting the models these associations were attenuated.

Conclusion DDE, PFOS and PFOA were associated with T4 in a sex-specific manner. As the study population was relatively small, results should be considered as exploratory. More research is warranted, as studies on the role of exposure to environmental contaminants in thyroid hormone homeostasis are still limited.

Background The presence of chemicals in the environment is ubiquitous. EDCs in particular may disrupt thyroid hormones, which in early life are essential for brain development. As observational studies regarding this topic are still limited, the objective of the current study was to assess the association between prenatal exposure to various EDCs and thyroxine (T4) levels in newborns in a mother-child cohort in the Netherlands.