Cystic Fibrosis in Republic of Moldova: Statistics and Reality

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**Actuality:** At present in Republic of Moldova according to official statistic data there are about 120 children with cystic fibrosis. There are 50 children with the confirmed diagnosis of cystic fibrosis in Clinic of pneumology of the Scientific Researches Institute for Children’s and Mother’s Healthcare.

**Aim:** To evaluate the epidemiological data, the clinical profile and explorative characteristic in children with cystic fibrosis from Republic of Moldova.

**Materials and methods:** This study included 21 boys, 19 girls age variety (<1 year – 2 children, 1 – 5 year – 10 children; 5 – 10 year – 14 cases; 10 – 15 – 10; 15 – 20 years – 13; 20 – 25 years old– 1 child). Genetic diagnosis was realized in children and their parents for 4 – 7 CFTR mutations. The explorative program for children with cystic fibrosis includes: sweat test, imagistic pulmonary examination (chest radiography, computed tomography), spirography, pulmonary scintigraphy, hepatic scintigraphy, echocardiography, sputum bacteriology, biochimism of serum (general protein, proteinogram, Ca, P, Na, K, Ast, Alt, coagulogram), immunogram (IgE, IgG, IgM, IgA), steatorrea.

**Results:** In 26 children (52%) ΔF508 mutation was revealed (in 21 children - homozygote), 1 child – L551D mutation, 1 case – R334W. The diagnostic of cystic fibrosis was established at the age of <1 year in 24 children, 1 – 5 year in 13 children, 5 – 10 year in 6 cases, 10 – 15 year in 6 children, 16 – 20 years in 1 child. Bacteriology of sputum was characterized by predominance of *S. aureus* in 66,15%, *Ps.aeruginosae* (10²-10⁹ mcr/ml) - 37,2%, *H.influenzae* – 35,6% and mixed infection with *S.aureus + Ps.aeruginosae* - 25,4% , *S.aureus + H.influenzae* - 11,9%, *S.aureus + Ps.aeruginosae + H.influenzae* - 3,4% cases. The respiratory insufficiency associated with restrictive and obstructive impairments was presented in 17 children. Spiral computed tomography has revealed saccate and cylindrical bronchiectasis (10 children), focal (4 children) and diffuse pulmonary fibrosis in 3 cases, signs of bronchiolitis (3 cases) and chronic bronchitis in 18 children. Pulmonary scintigraphy showed perfusion disturbances in the affected lung areas.

**Conclusion:** There is a predominance ΔF508 CFTR mutation in children with cystic fibrosis in Republic of Moldova. Bronchopulmonary affecting is characterized by chronic infection with *Ps. aeruginosae, S.aureus, H.influenzae*, ventilatory function disorders, bronchial remodeling and sectors of pulmonary fibrosis.