

Electrophoretical mobility of nuclei in buccal cells of cystic fibrosis patients

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ABSTRACT

Introduction: Cystic fibrosis (CF) is inherited, metabolic, multisystem disease with various clinical symptoms. In the airways neutrophilic inflammation and increased levels of neutrophil elastase (NE) are observed even in young children. The method of electrophoretic mobility of cell nuclei (EMN) is a way of assessment cell maturity. Observed distorted nuclei mobility is mostly dependent on chromatin distribution and remodeling.

Purpose: To evaluate the EMN index in buccal cells collected from CF patients.

Materials and methods: The study was conducted in the group of 15 CF patients aged 5-26 years.

Results: In the healthy subjects we have observed that the lowest EMN index values were reached around 2 year of life (7.6 ± 3.1) and in the late senescence (8.5 ± 2.5) with the peak values around 16-21 years (61.4 ± 2.5). The results differed significantly from the healthy controls.

Conclusion: EMN index in CF buccal cells may be a simple method to quickly assess the chromatin remodeling.

Key words: cystic fibrosis, children, electrophoretic mobility of cell nuclei
