

The Microflora Assessment of the Urethra Area of Children with Newly Diagnosed Type 1 Diabetes

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Abstract : Introduction: Various infections can affect children suffering from Type 1 Diabetes (T1D) because of dysfunctions of the immune system. The urinary tract and urethra of these children can be easily infected areas because of glycosuria. Aim: The microflora assessment of the urethra area of children with newly diagnosed T1D. Methods: The materials of the study were swabs taken prospectively from the urethral area of 63 children at the time of diagnosis of T1D (37 boys), then the results were correlated to the clinical parameters. In the statistical analysis, there were T student, Chi square, and U Mann-Whitney tests used. Results: The mean age was 9.4 years (6 months-17.4 years). The mean HbA1c value was 12.1% (5,6% - 20.1%). The mean value of glycosuria was 4463.2 mg/dl (0 - 9770 mg/dl). Ketoacidosis was diagnosed in 29 children (49%). The following microbial species were isolated in the collected materials: Staphylococcus epidermidis in 18 children (28.6%), Enterococcus faecalis in 17 children (27%), Candida albicans in 15 children (23.8%), coagulase-negative staphylococci in 11 children (17.5%), group B Streptococcus beta-hemolysis in 10 children (15.9%), S. aureus, E. coli, S. anginosus, C. glucuronolyticum, and A. urinae in 7 children each (11.1%), group B Streptococcus beta-hemolysis and S. hominis in 6 children each (9.5%), L. gasseri in 5 children (7.5%), C. dubliniensis in 4 children (6.3) and other, isolated cases. 2 of diagnosed patients were cultured negatively (3.2%). There were statistical correlations between the type of colonisation and patients' sex and HbA1C value. Conclusions: It is extremely important to examine the urethral area at the time of diagnosis of T1D in order to detect inflammation and to undertake the appropriate and effective intervention.

Keywords : diabetology, skin disorders, microbiology, microflora

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