Gingival Status in Children with the Diagnosis of Pyelonephritis

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Introduction

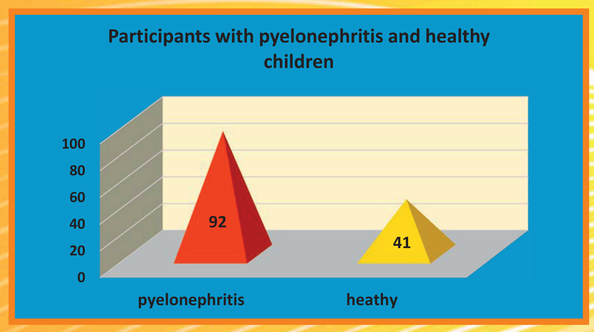
Nephrological noxae exert a complex of harmful effects upon tissues, organs and systems of the body. [1] [2] Kidney disorders, with the traits of fluctuating dynamics of progression, can result in significant reduction of the scope of activities directed towards sustenance of personal and community proper health condition. It is related to considerable affliction of the cares performed for providing full of value in functional, prophylactic and esthetic aspect oral-dental health. [3] [4] [5] Hard teeth structures and soft tissues into the oral cavity can be upon the damaging impacts of kidney diseases. [6] [7] The state of gingival tissues serves as one of the most essential and explicit criteria of assessment of caries risk. [8], [9]

The purpose of our study is to investigate the gingival status in patients of child's age suffering from pyelonephritis, compared with healthy children.

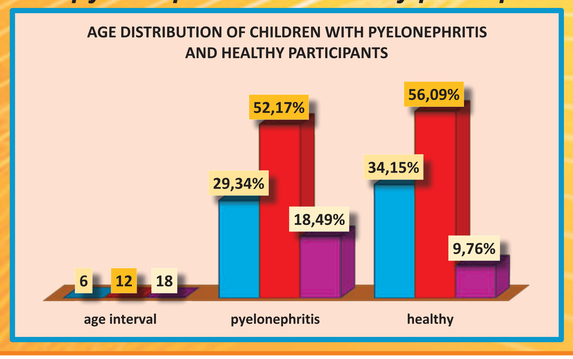
Materials

The subject of this research are 92 males and females from 0 to 18 years of age, hospitalized by the reason of established pyelonephritis. The group of healthy controls includes a number of 42 children characterized with no common health disorders. (Graphic 1)

Graphic 1 Participants with pyelonephritis and healthy children



Graphic 2 Age distribution of children with pyelonephritis and healthy participants



Children with diagnosed pyelonephritis who are characterized with primary dentition (up to the age of 6) amount to 29,34 %, compared to healthy children- 34,15 %.

Regarding children suffering from pyelonephritis the greatest ratio of 52,17 % accounts to representatives with mixed dentition (from 6 to 12 years of age), in comparison to 56,09 % of healthy controls. The smallest number of participants with renal disorder, namely 18,49 %, are with permanent dentition. Less than 10%, precisely 9,76 %, of healthy children are included in the age interval between 13 and 18 years and are characterized with permanent dentition. (Graphic 2)

Methodology

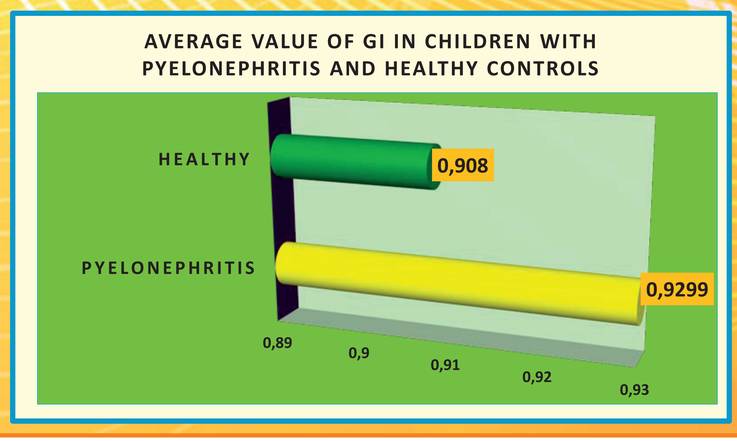
We have implemented the clinical method of registration of the gingival index GI by Löe-Silness. Descriptive analysis concerning both of the groups of the investigation has also been applied. (Graphic 3)

Graphic 3 Methods of investigation



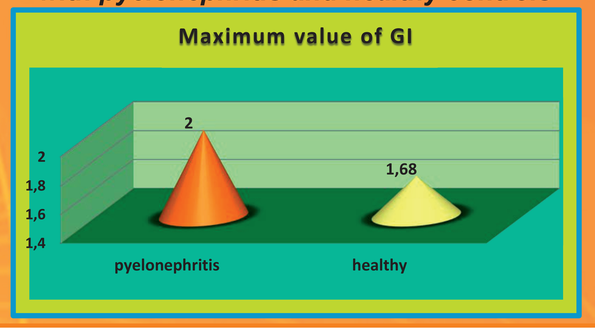
Results

Graphic 4 Average value of GI in children with pyelonephritis and healthy controls



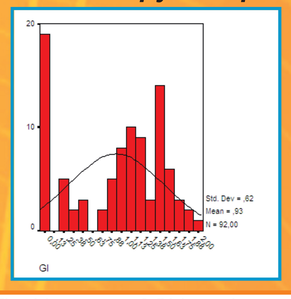
The average value of the index of GI is higher in patients with diagnosed pyelonephritis (0,9299), compared with healthy children (0,908). (in the context of 95 % of confidence interval of descriptive analysis) (Graphic 4)

Graphic 5 Maximum value of GI in children with pyelonephritis and healthy controls



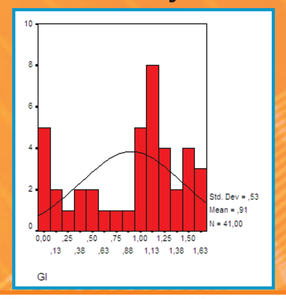
The maximal value of the indicator for gingival inflammation GI is considerably lower in children with no kidney disorders (1,68) in comparison to these with the diagnosis of pyelonephritis (2,00). (Graphic 5)

Graphic 6 Histogram of GI in children with pyelonephritis



The histogram of GI in patients with pyelonephritis illustrates that among the predominant ratio of these participants the value of GI fluctuates between 0,99 and 2,00. (Graphic 6)

Graphic 7 Histogram of GI in healthy children



The histogram of GI in healthy controls demonstrates that among the prevailing ratio of these children has been recorded the value of GI equal to 1,18. (Graphic 7)

Conclusion

Taking into consideration the evaluation of the status of gingival tissues among the representatives of both groups involved into the study, we can conclude that children suffering from the kidney disorder of pyelonephritis are in higher risk of gingival inflammation in relation to healthy participants.

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