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Molecular and Cellular Biochemistry
2022

Tactics for treating young children with pyelonephritis and vesicoureteral reflux associated with impaired fibrillogenesis

(Article in press ?)

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Abstract

The purpose of this study is to substantiate the choice and evaluate the effectiveness of therapeutic tactics aimed at suppressing collagen formation and improving metabolic processes in the kidney parenchyma in young children with pyelonephritis against the background of vesicoureteral reflux associated with undifferentiated tissue dysfunction. 67 children from 2 weeks to 3 years old with pyelonephritis and vesicoureteral reflux were examined. All children during the period of remission of the inflammatory process were examined for the content of oxyproline in the urine. Urine crystallinity and urinary excretion were determined, and markers of the morphofunctional state of the cytomembranes of the renal epithelium were determined: calcification test—the presence of polar lipids in the urine and test for the presence of lipid peroxidation products in the urine. Children with high urinary hydroxyproline excretion prior to protocol treatment of pyelonephritis during the remission of the inflammatory process at the stage of maintenance therapy were recommended to receive metabolic preparations that can inhibit collagen formation and improve parenchyma metabolic processes during the month—vitamin E 10% and L-carnitine in age-related doses. After 6 months, a study was made on the functional state of the renal parenchyma in the dynamics of treatment. After metabolic antihypoxic and membrane-protective therapy, there was a significant positive dynamic of all markers of tissue hypoxia and membrane destruction in the kidney parenchyma, which confirms the inhibition of collagen formation processes and a decrease in tissue hypoxia with vitamin E and L-carnitine in age-related doses. © 2022, The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature.

Author keywords

Metabolic therapy Renal epithelial Tissue hypoxia Undifferentiated dysplasia Urine

ISSN: 03008177

CODEN: MCBIB

Source Type: Journal

Original language: English

DOI: 10.1007/s11010-022-04529-7

PubMed ID: 35943657

Document Type: Article

Publisher: Springer

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