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## ***The Effects of Unilateral Urethral Obstruction on Tubular Cells Apoptosis: An Experimental Study in Rabbits***

## ***The Effects of Unilateral Urethral Obstruction on Tubular Cells Apoptosis: An Experimental Study in Rabbits***

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### **Abstract**

To explain effects of unilateral urethral obstruction on tubular cells apoptosis as the mechanism of renal dysfunction. Forty-eight rabbits (*Oryctolagus cuniculus*) underwent distal unilateral urethral obstruction. The experimental animals were divided into 6 groups: 2 groups had sham operation, which served as control, 2 groups had left urethral partial obstruction, 2 groups had left urethral total obstruction. Tubular cells apoptosis of the ipsilateral kidney were analyzed 7 days and 14 days after obstruction by means of immunohistochemical method. T analysis revealed no different tubular cells apoptosis of the ipsilateral kidney between partial urethral obstruction groups and control groups at 7 and 14 days ( $p = 0.085$  and  $p = 0.252$ ), but there were differences in total urethral obstruction groups at 7 and 14 days. ANOVA analysis revealed that in unilateral urethral obstruction there were different tubular cells apoptosis of the ipsilateral kidney in control, partial and total urethral obstruction groups at 14 days ( $p = 0.0001$ ). There were different tubular cells apoptosis of the ipsilateral kidney between control and partial urethral obstruction groups, control and total urethral obstruction groups ( $p = 0.0001$ ) at 7 days. Tubular cells apoptosis of the ipsilateral kidney in total urethral obstruction groups were different at 7 and 14 days ( $p = 0.012$ ), and not different in partial urethral obstruction groups at 7 and 14 days ( $p = 0.252$ ). There were no different tubular cells apoptosis of the ipsilateral kidney in partial and total urethral obstruction at 7 days but the difference was found at 14 days.

Keyword : Unilateral, urethral, obstruction, tubular, cells, apoptosis, ipsilateral, kidney,

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