Hyperbilirubinemia and Intermittent Lower Urinary Tract Dysfunction: A Story

Viroj Wiwanitkit

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Sir,

I read the recent publication on hyperbilirubinemia and urinary tract dysfunction with great interest [1]. In this work, Stojanović et al. concluded that “hyperbilirubinemia might be a predisposing factor for intermittent lower urinary tract dysfunction in children [1].” I have some discussions on this work. First, this is not a case-control but a descriptive study. Hence, it might not be possible to bring any summary on the “risk”. Second, the quality control of the laboratory analysis for bilirubin should be discussed. Third, there is no possible pathophysiological explanation for the induction of urinary tract dysfunction by hyperbilirubinemia. Generally, in a case with bilirubin in urine detected by standard urinalysis, there is no report on any effect of bilirubin on urinary function. Conclusively, the work might be only an accidental finding without any clinical importance.

Reference

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Author's Reply

Sir,

In our study, there were not a significant number of patients with Gilbert's syndrome with pathological uroflow along with the pathological values of bilirubin, but we found interesting and valuable fact that they all had normal uroflow when the values of bilirubin in the serum were normalized. Each patient was a control of its own, postfasting uroflowmetry being experimental and post hypercaloric uroflowmetry, the control.

V. Wiwanitkit (✉)
Wiwanitkit house, Bangkhuae,
Bangkok, Thailand 10160
e-mail: wviroj@yahoo.com

As said, this was the first study working on this issue. A number of references were quoted where the authors have pointed out a possible relaxed effect of bilirubin on smooth muscles of gastric fundus and blood vessels (1, 2, 3, 4) and urinary tract muscles (5,6,7). It is proposed that bilirubin expressed the mentioned effect on smooth muscles by potentiating influence on NO relaxing effect.

It is possible that other diseases except hyperbilirubinemia affect muscle relaxation of urinary tract (i.e. hyperglycemia), which is also mentioned in the article. Further examinations are required to confirm our conclusions.

Vesna Stojanović and Tamara Vukavić¹

Department of Pediatric
Nephrology and ¹Gastroenterology,
Institute for Child and Youth Health
Care of Vojvodina, Hajduk Veljka
10., Novi Sad, Serbia
e-mail: vesnasto@eunet.rs

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