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Value of voiding cystourethrography in kidney transplant protocol; does it replace the urologist?

Pablo Sierra
Hospital Pablo Tobon Uribe, Colombia

Introduction & Objectives: There is no consensus about different clinical tests used for kidney pre-transplant urologic evaluation. The protocols vary according to each transplant group experience and there are no clear guidelines about this topic. We show the experience of a high volume kidney transplant center in Colombia where voiding cystourethrography is used as a protocolary test previous to renal transplantation.

Materials & Methods: 331 kidney transplants were performed from January 2009 to December 2012 in Hospital Pablo Tobon Uribe. 233 clinical records were evaluated, 223 voiding cystourethrography (VCU) were done.

Results & Discussion: 39 abnormal VCU (17.4%), 19 VUR, 4 bilateral and 15 unilateral, 5 with diminished bladder capacity, one with BPH and 1 because augmented bladder capacity.

Conclusion: Although large proportion kidney pre-transplant patients have an abnormal VCU, this does not change clinical or surgical conducts before transplantation. Instead of using urinary tract protocolary tests, a complete urologic evaluation should be considered.

sierrapablo@hotmail.com

Kidney atrophy vs. hypertrophy in Diabetes: Which cells are involved?

Samy L Habib^{1,2}
¹South Texas Veterans Health System, USA
²University of Texas Health Science Center, USA

Renal enlargement, one of the first structural changes in diabetic nephropathy (DN), is due to the hypertrophy of existing glomerular and tubular cells rather than to cellular proliferation. The initial tubular epithelial cell hypertrophy is considered “compensatory” and “adaptive” hypertrophy. Hypertrophic cells are arrested in the G1-phase of the cell cycle and increase protein and RNA content, but do normally not replicate their DNA. Each kidney contains about a million nephrons, which are the basic functional units of the kidneys. Increase in renal size, predominantly due to proximal tubular epithelial cell hypertrophy. On the other hand, kidney atrophy results from loss or inadequate circulation of nephrons. The renal veins and arteries start to shrink because of the loss of the function of the kidney. A loss of nephrons or abnormal nephron function is most likely to have an adverse effect on the kidney function as well as could lead to shrink the kidney. However overtime, tubular cell hypertrophy is associated with the subsequent infiltration of macrophages/monocytes of T and fibroblast cells into the tubulointerstitial space, which results in tubular atrophy and tubulointerstitial fibrosis. The rate of deterioration of kidney function shows a strong correlation with the degree of tubulointerstitial fibrosis. Alterations in renal structure may occur that are not specific to nephropathy but reflect a consequence of long-standing diabetes/hyperglycemia. The type of renal cells in atrophy and hypertrophy in diabetes will be evaluated.

Habib@uthscsa.edu

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