



**Current Issue**

**Browse Issues**

**Search**



**About this Journal**

**Instruction to Authors**

**Online Submission**

**Subscription**

**Contact Us**



**RSS Feed**

Acta Medica Iranica  
2009;47(4) : 163-166

### Original Article

#### Renal Cortical Thickness in Adults with Normal Renal Function Measured by Ultrasonography

A. Adibi MD<sup>1</sup>

A. Emami Naini MD<sup>2</sup>

H. Salehi MD<sup>3</sup>

M. Matinpour MD<sup>3</sup>

1. Assistant Professor, Department of Radiology, Isfahan University of Medical Sciences, Isfahan, Iran.
2. Assistant Professor, Department of Nephrology, Isfahan University of Medical Sciences, Isfahan, Iran.
3. Department of Radiology, Isfahan University of Medical Sciences, Isfahan, Iran.

#### Corresponding Author:

Atoosa Adibi

Address: Department of Radiology, Alzahra Hospital, Isfahan, Iran.

Tel: +98-311-625-55-55

Fax: +98-311-625-55-55

Email: a\_adibi@med.mui.ac.ir

Received: October 15, 2007

Accept: May 3, 2008

#### Abstract:

**Background/Objective:** Renal cortical thickness is an important index for many renal diseases. Ultrasonography has been introduced as an effective method to determine different renal measurements. The objective of this study was to determine the sonographic measurement of renal cortical thickness (RCT) in adults with normal renal function in Isfahan and its relation with gender, age, height, weight, body mass index (BMI), and the side of the body.

**Patients and Methods:** 142 healthy subjects aged 20-50 years with no history of renal or systemic diseases were studied prospectively. These patients had normal BUN/Cr tests and urine analysis. They also had a normal kidney sonography. Gray scale sonography was used to measure the distance between the outer border of the medulla and the renal capsule, presenting as RCT.

**Results:** 80 men and 62 women with a mean±SD age of 38.8±7.7 years underwent sonography. The mean±SD RCT was 9.09±0.99 mm. RCT associated with gender (P=0.02) but there was no significant difference between the right and left RCTs (P=0.15). There were significant positive correlations between RCT and renal length and the patients' height, but such a correlation was not observed between RCT and age, BMI, and the patients' weight.

**Conclusions:** RCT varies with many variables including gender, height and length of the kidney. The results of this study can be used for evaluation of RCT to determine abnormal clinical conditions.

#### Keywords:

Ultrasonography . Kidney Cortex . Adult

TUMS ID: 11904

Full Text HTML Full Text PDF 395 KB

[Home](#) - [About](#) - [Contact Us](#)

TUMS E. Journals 2004-2009  
Central Library & Documents Center  
Tehran University of Medical Sciences

Best view with Internet Explorer 6 or Later at 1024\*768 Resolutions