“Renal resistive index as a predictor of acute hydro nephrosis in patients with renal colic”

Abstract

Aim: The objective of our study was to determine the sensitivity, specificity and diagnostic accuracy of the renal resistive index in diagnosing obstructive uropathy taking non enhanced helical CT as the gold standard.

Material and method: The descriptive study was conducted at department of radiology KMC and royapettah Chennai from augest 2013 to may 2015 comprised 200 patients referred from the causality with complaints of unilateral renal colic. All patients were evaluated with bilateral colour Doppler ultrasound and subsequently plain CT KUB reconstructed images. CT scan results were taken as gold standard and the results were compared with CDUS. Renal resistive index of more than 0.7 and delta resistive index of 0.06 was considered diagnostic of obstructive uropathy.

Result: sensitivity of RI and delta RI was 74.80% and 76.37%, specificity of RI and delta RI was 87.83% and 90.41% respectively. the diagnostic accuracy of RI and delta RI was 79.50% and 81.5%.

Conclusion: CDUS Renal RI is less sensitive in diagnosing acute ureteric obstruction. if delta RI is applied the sensitivity and specificity in diagnosing acute ureteric obstruction will be increased.

KEY WORDS: renal colic, obstructive uropathy, colour Doppler ultra sound, resistive index, delta resistive index.