

1054

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CORRELATION BETWEEN PERIVESICAL ENHANCEMENT IN CT AND CYSTOSCOPIC FINDINGS OF INTERSTITIAL CYSTITIS

Hypothesis / aims of study

Contrast-enhanced bladder CT scan is believed to have limited clinical value in diagnosing interstitial cystitis(IC) ruling out potential malignancy or other possible causes of pelvic or bladder pain.

In this study, we hypothesized that destructed urothelial barrier function and chronic inflammatory reactions of IC bladder would result in bladder and surrounding tissue changes which might visible in contrast-enhanced CT. Therefore, we investigated the correlation between cystoscopy and CT findings of the IC bladder.

Study design, materials and methods

Twenty IC patients who had been had cystoscopy and fulguration under general anesthesia with pre-operative abdomino-pelvic dynamic CT (with contrast enhancement) were retrospectively reviewed. As the control group, 11 age-matched asymptomatic microscopic hematuria patients without any urological history including urinary tract infection were selected.

Cystoscopic findings including Hurner's leasions, and CT findings including bladder wall thickness were evaluated and analysed to find their correlations.

Results

Fourteen out of 20 IC patients showed bladder wall thickening in dynamic CT. On the other hand, control group did not show any abnormal finding either in the bladder dynamic CT nor cystoscopy. In IC group, all 14 patients with bladder wall thickening compared with control group had Hurner's lesion and 75% of them had correlation between their bladder lesions and bladder wall thickenings of the dynamic CT (Mann-Whitney test, $p=0.002$).

Severities and numbers of the bladder lesions such as Hurner's lesion, glomerulation, or mucosal crackings showed significant correlations with CT findings of the bladder (Mann-Whitney test, $p<0.001$).

Interpretation of results

Pathologic changes of the bladder tissue in IC are also reflected in dynamic abdomino-pelvic CT in accordance with disease severities.

Concluding message

Advanced IC can be detected even with the dynamic CT of the bladder. To have more reliable data whether dynamic CT would be a benefit option for diagnosis and follow up for IC, further studies are undergoing.

Disclosures

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