

급성신장경색 환자들의 신기능 변화

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Renal Outcomes of Patients with Acute Renal Infarction

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Background: Renal infarction (RI) is an uncommon disease which is difficult to diagnose without clinician's suspect. Although underlying hypercoagulable state is known to be a risk factor and the consequent renal mass reduction can affect its renal outcomes, little is known about the clinical characteristics or longterm renal outcome.

Methods: This is a single center and retrospective study for 89 patients with newly diagnosed acute RI between January 2002 and March 2015. They were diagnosed by one of imaging studies such as CT, sonography and angiography. The clinical features, possible etiologies and longterm renal outcome data were reviewed.

Results: The mean age was 63.5 ± 15.4 years and 21 (23.6%) and 50 (50.6%) had diabetes and hypertension respectively. Bilateral involvement was shown in 18 patients (19.1%). Among underlying diseases, cardiovascular disease was most common (38.2%) and renal vascular injury and hypercoagulability disorder were found in 13(14.6%) and 3 (3.4%). In addition, idiopathic RI comprised 14 (15.7%) of cases. Although abdominal pain was the most common primary symptom, 25.8% of patients had no specific symptoms. For the treatment, anti-platelet therapy, anticoagulation or thrombolysis were used in 47 (52.8%), 54 (60.7%) or 3 (3.4%), respectively. At the time of diagnosis, acute kidney injury (AKI) was accompanied in 31 (34.8%) of patients. In univariate analysis, old age, diabetes, smoking, high CRP and leukocytosis were significant risk factors for the development of AKI. In multivariate analysis, diabetes and high CRP level were independent risk factors of AKI. During follow up period (27.9 ± 29.2 months), chronic kidney disease (CKD) with $eGFR < 60 \text{ mL/min/1.73m}^2$ developed in 19.1%. In univariate analysis, development of CKD was associated with old age, hypertension, smoking, leukocytosis, history of AKI and more than two underlying diseases. However, in cox-regression analysis, only old age was found to be an independent risk factor for the development of CKD.

Conclusion: We found that idiopathic renal infarction (RI) comprised about one sixth of overall cases and the clinical presentation of RI is usually non-specific. Considering that AKI and CKD were relatively common complications of RI, more careful attention to the patients with RI should be paid for the development of progressive CKD.

Key Words: 급성신장경색, 급성신부전, 만성신부전
Renal infarction, AKI, CKD