P-130

조영제 신증의 예측인자로서의 혈청 삼투압차

분당서울대학교병원 내과[1], 가천의대길병원 내과[2]

김세중[1], 성지윤[2], 조미영[2], 강웅철[2], 정지용[2], 장제현[2], 이현희[2], 정우경[2]

Serum Osmolar Gap as a Predictor of Contrast Induced Acute Kidney Injury

Sejoong Kim[1], Jiyoon Sung[2], Mi-Young Jo[2], Woong Chul Kang[2]
Ji Yong Jung[2], Jae Hyun Chang[2], Hyun Hee Lee[2], Wookyung Chung[2]

Department of Internal Medicine[1] Seoul National University Bundang Hospital
Department of Internal Medicine[2] Gachon University Gil Hospital

Background: Contrast induced acute kidney injury (CIAKI) is common complications after coronary angiography (CAG). Hyperosmolality or amount of contrast media can be one of risk factors for CIAKI. However, there is no study on serum osmolar gap as a predictor of CIAKI.

Methods: We enrolled 106 patients who undergoing elective CAG, and tested changes of serum osmolality, osmolar gap, and renal function at hour 0, 6, 12 and 24 hours.

Results: The incidence of CIAKI was 15.7% (17/108 patients). CIAKI group had higher levels of serum osmolar gap 6 hours after CAG, which was positively correlated with the amount of contrast media ($r=0.411$, $p<0.001$). Adjusted hazard ratio of serum osmolar gap at hour 6 (1-mmol/L increment) to the development of CIAKI was 1.14 (95% confidence interval [CI], 1.034-1.264; $p=0.008$). Sensitivity and specificity of serum osmolar gap at hour 6 of 5 mmol/L or more were 66.7% and 69.3%, respectively (area under the ROC curve=0.759 [95% CI, 0.632-0.885]).

Conclusion: Transient increased serum osmolar gap may precede the development of CIAKI in patients undergoing CAG. It suggests that it may be a useful predictor for the development of CIAKI.

Key Words: 급성신손상, 조영제, 삼투압
Acute kidney injury, Contrast media, Osmolality