

DNI는 급성 이식 거부반응과 급성 이식 신우신염을 구별할수 있는 지표이다

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신동호, 김수진, 전희중, 오지은

Delta Neutrophil Index as a Marker for Differential Diagnosis between Acute Graft Pyelonephritis and Acute Graft Rejection

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Purpose: The delta neutrophil index (DNI) is the fraction of circulating immature granulocytes, which reflect infectious and/or septic condition. Acute graft pyelonephritis (AGPN) versus acute graft rejection is a frequently encountered diagnostic and therapeutic dilemma in renal transplant recipients, but little is known about the clinical usefulness of DNI in the differentiation of the two conditions.

Material and Methods: A total of 81 episodes of AGPN or acute graft rejection were evaluated at the Kangdong Sacred Heart Hospital between 2010 and 2014. We performed retrospective analysis of demographic, clinical, and laboratory parameters data. Receiver operating curves (ROC) and multivariate logistic regression were conducted to ascertain the utility of DNI in discriminating between AGPN and acute graft rejection.

Results: Episodes in the AGPN group had significantly higher DNI values than those in acute graft rejection group. The area under the ROC curve for DNI to discriminate between AGPN and acute graft rejection was 0.84 (95% confidence interval [CI]; 0.75-0.92, $p < 0.001$). A DNI value of 2.7% was selected as the cut-off value for AGPN, and renal transplant recipients with a $DNI \geq 2.7\%$ were found to be at a higher risk of infection than those with a $DNI < 2.7\%$ (odd ratio [OR] 27.79; 95% CI 5.91-130.79; $p < 0.001$). In a multivariate logistic regression analysis, DNI was a significant independent factor for predicting AGPN (OR 2.76; 95% CI 1.60-4.77, $p < 0.001$).

Conclusions: This study showed that DNI was an effective marker to differentiate between AGPN and acute graft rejection.

Key Words: 구별, 거부 반응, 신우신염

Discrimination, Pyelonephritis, Rejection