

복막투석 환자에서 다베포에틴알파와 에포에틴 알파 정주 시 혈중 Endothelin-1, Nitric oxide, 혈압의 변화

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Comparison of Single dose Effects of Dabepoetin Alfa and Epoetin Alfa on serum Endothelin-1 and Nitric Oxide Levels in Capd Patients

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According to the results of past research, the subcutaneous administration of rHuEPO did not cause significant changes in blood pressure, Big endothelin-1, and endothelin-1; note, however, that intravenous administration resulted in high blood concentration of rHuEPO, which isolated endothelin-1 from endotheliocyte. This shows a significant correlation between endothelin-1 concentration and hypertension. The rHuEPO dose needed for intravenous administration is 30-50% more than that needed for subcutaneous administration; intravenous administration is likely to cause hypertension. Therefore, it is generally administered subcutaneously 2-3 times a week. Dabepoetin alfa has a longer half-life and demonstrated that intravenous(IV) and subcutaneous(SC) dose requirements are comparable. this finding may allow dialysis patients receiving SC injection to switch to IV dosing on their convenience. a few data available, However, on the effects of darbepoetin alfa on serum ET-1, NOx and blood pressure. this study was conducted to compare the effects of darbepoetin alfa and epoetin alfa on serum ET-1, NOx and blood pressure in CAPD patients .

30 stable CAPD patients were included . A single dose of epoetin alfa (100 U/kg body weight) was injected and Blood pressure, ET-1, and NOx were serially measured before, 1hr, 6hr, and 24hr. After 4 weeks washout periods, dabepoetin alfa, a same dose of epoetin alfa (200 iu epokine=1 ug dabepoetin alfa) was injected and Same parameters were measured serially.

Serum levels of ET-1 before, 1hr, 6hr and 24hr after epoetin alfa (dabepoetin alfa) injection were 2.8 (2.7), 2.82 (2.79), 3.36 (2.93), 2.69 (3.42) pg/mL respectively.

Serum levels of NOx before, 1hr, 6hr and 24hr after epoetin alfa (dabepoetin alfa) injection were 229 (245), 233 (206), 240 (242), 252 (233) umol/L respectively.

There were no significant differences in blood pressure, ET-1 and NOx levels between epoetin alfa and dabepoetin alfa groups.

A single dose injection of dabepoetin alfa in CAPD patients, compared to epoetin alfa, showed no differences in ET-1, NOx and blood pressure. We need long term effects of intravenous administration of dabepoetin alfa.

Key Words : 다베포에틴알파, 고혈압, ET-1

Dabepoetin alfa, ET-1, Hypertension