Clinical Significance of Thrombopoietin (Tpo) and Reticulated Platelet (R-plt) between HD and CAPD Patients (pts)

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Tpo is a cloned growth factor, which plays a major role in the regulation of thrombopoiesis and megakaryopoiesis. However, the relationships of serum Tpo and R-plt in thrombocytopenic patients who received HD or CAPD is unknown.

Purpose: To identify one of the pathogenesis of thrombocytopenia, we evaluated serum Tpo and R-plt in HD and CAPD patients with/without thrombocytopenia.

Methods: The levels of serum Tpo and the percentage of R-plt in samples obtained from peripheral vein in 35 chronic hemodialysis patients (16 pts with thrombocytopenia: Group 1 vs. 19 pts without thrombocytopenia: Group 2) and 50 CAPD pts (11 pts with thrombocytopenia: Group 3 vs. 39 pts without thrombocytopenia: Group 4) and compared with 30 healthy controls: Group 5). Pts with a history of HBV/HCV infection and hepatobiliary diseases were excluded. Serum Tpo levels was determined with a commercially available ELISA kit and the R-plt was measured by flow cytometry.

Results: The table shows that there was significant difference in Tpo and R-plt levels for either group ($p<0.01$).

	Tpo(pg/ml)	Reticulated-PLT(%)
Group1(n=16)	73.01±10.03	4.57±2.32
Group2(n=19)	92.96±15.12	8.13±3.46
Group3(n=11)	147.03±63.90	2.43±1.08
Group4(n=39)	304.66±150.50	1.77±0.42
Group (n=30)	127.17±111.64	2.14±0.46

Conclusions: We suggest that there were not only different in production of Tpo but also different mechanism and response for thrombopoiesis and megakaryocytopoiesis by Tpo between HD and CAPD patients.