中文題目：在腹膜透析患者中，半乳糖凝集素-3與周邊動脈阻塞性疾病的正相關性研究
英文題目：Positive association of serum galectin-3 level with the peripheral arterial disease in patients with peritoneal dialysis
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Background:

Galectin-3 expressed by epithelial cells, endothelial cells, and macrophages, with multiple biological abilities, including cell proliferation, differentiation, growth, and inflammation; it also participates in cardiovascular development. Peritoneal dialysis (PD) was an independent predictor for further mortality in uremic patients with subclinical peripheral arterial disease (PAD). The aim of this study was to evaluate the relationship between serum values of galectin-3 levels and ankle-brachial index (ABI) values in PD patients.

Method:

Fasting blood samples were obtained from 92 PD patients. Ankle-brachial index (ABI) values were measured using an ABI-form device. Serum galectin-3 concentrations were determined by commercially available enzyme-linked immunosorbent assays. Left or right ABI values < 0.9 were included in the low ABI group.

Results:

19 PD patients (20.7%) were in the low ABI group. Compared with patients in the control group, patients in the low ABI group had higher prevalence of diabetes ($p = 0.010$), older age ($p = 0.009$), higher serum fasting glucose ($p = 0.001$), triglyceride ($p = 0.021$), C-reactive protein ($p < 0.001$), galectin-3 level ($p < 0.001$), while lower total clearance of creatinine ($p = 0.028$). Multivariable logistic regression analysis of the factors significantly associated with PAD revealed that serum galectin-3 level (Odds ratio: 1.147, 95% confidence interval (CI): 1.053–1.249, $p = 0.002$) and C-reactive protein level (increase 0.1 mg/dL, Odds ratio: 1.181, 95% CI: 1.050–1.328, $p = 0.005$) were the independent predictor of PAD in PD patients. The area under the curve plotted to estimate the optimal level of galectin-3 predicting PAD in PD patients by the receiver-operating characteristic curve analysis was 0.844 (95% CI: 0.753–0.911, $p < 0.001$). There was significantly negative correlation between galectin-3 with right and left ABI as -0.317 and -0.348 ($p = 0.002$, and 0.001), respectively.

Conclusion:

High serum level of C-reactive protein and galectin-3 were found to be independent risk factors for predicting PAD in PD patients.