

中文題目：在血液透析病患，踝肱指數和腹部主動脈鈣化程度的關聯性

英文題目：The Association between Ankle-brachial Index and Severity of Abdominal Aortic Calcification in Hemodialysis Patients

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### **Background:**

Vascular calcification is common and associated with unfavorable prognosis in patients undergoing hemodialysis (HD). Factors associated with abdominal aortic calcification (AAC) and its relationship between ankle-brachial index (ABI) are not clearly understood.

### **Materials and Methods:**

We included 157 chronic HD patients (mean age  $60.6 \pm 10.4$  years, 53.5% men) from a regional hospital in 2017. The AAC-24 score was determined from lumbar spine lateral standing radiographs, and patients was classified as mild AAC (score 0-4), moderate AAC (score 5-12) and severe AAC (score 13-24). ABI was measured before HD treatment. Femoral neck bone mineral density was obtained from dual energy x-ray absorptiometry. Factors associated with severe AAC were assessed using multiple logistic regression analysis.

### **Results:**

Overall, 34.4% (n=54) patients had mild AAC, 35.7% (n=56) had moderate AAC and 29.9% (n=47) had severe AAC. Age, diabetes, coronary artery disease and total calcium were positively correlated with AAC score, whereas ABI and albumin were negatively correlated with AAC score in multivariate stepwise linear logistic regression. Furthermore, older age (OR, 1.076; 95% CI, 1.023–1.131), male gender (OR, 2.861; 95% CI, 1.159–7.059), lower ABI (OR: 0.726; 95% CI, 0.579–0.909), lower albumin (OR, 0.042; 95% CI, 0.006–0.303) and higher total calcium (OR, 2.175; 95% CI, 1.269–3.727) were significantly associated with severe AAC.

### **Conclusion:**

Lower ABI, malnutrition and higher total calcium level were independently associated with severe AAC in maintenance HD patients. Physicians should pay attention to these indicators for severity of AAC and create strategies to mitigate vascular calcification in this patient population.

**Key words:** Ankle-brachial index, abdominal aortic calcification, hemodialysis