

## **Dose serum D-dimer in Non-cardioembolic Ischemic Stroke have clinical prognostic value?**

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Background: Although D-dimer levels are significantly associated with cardioembolic infarction, the significance of D-dimer levels in relation to the severity and functional outcomes of other stroke subtypes, such as lacunar and large artery atherosclerosis (LAA) infarction, remains unclear. The purpose of this study was to evaluate whether elevated initial D-dimer levels are significantly and cross-sectionally associated with poor functional outcomes at each time point during a nine-month follow-up period. We also investigated the significance of D-dimer levels in longitudinal temporal changes of functional outcomes in these patients. Methods: We recruited 146 patients with lacunar infarction and 161 patients with LAA infarction who were consecutively admitted to our hospital after acute stroke. Serum D-dimer levels were evaluated initially and the modified Rankin scale (mRS) were measured initially and at 1-month, 3-month, 6-month, and 9-month follow-up visits. Results: Patients with higher D-dimer levels had significantly worse initial functional outcomes, and these worse outcomes were maintained throughout the 9-month follow-up period compared to the low D-dimer group. However, regardless of stroke subtype, D-dimer levels did not influence long-term changes in functional outcomes over the 9-month follow-up period. Conclusion: This study suggests that elevated D-dimer levels can be used as a surrogate marker for poor functional outcomes only during the acute stage. Further evaluation of serum D-dimer levels could provide a helpful predictive marker for stroke prognosis.