The Impact Of Brain Atrophy In The Young Patient with Severe Heart Failure

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Topic(s):
Heart and Brain Interaction

Citation:

Background: Recently, several reports recognized the heart failure (HF) effected the brain impairment by impaired vascular blood flow and brain atrophy. However, there are no report mentioned the relationship brain atrophy and the mortality in young patient with severe HF.

Methods: A total 368 patients with severe HF form 2009 to 2014. We analyzed 117 patients aged under 55 years old without past history of cerebral artery disease. We evaluated the brain atrophy using head CT data by AZE VitualPlace and compared their clinical background, cardiac function, and the mortality.

Results: The mean age was 41±10 years (male 80%) and the average LVEF was 39±8%. The median follow-up period was 1.264 days. During the observations, we observed a total of 12 all cause death. The ROC analysis revealed that 10.2% of atrophy area was cut-off and the sensitivity was 80%, specificity was 69.5% and the area under the curve was 0.71. In univariate analysis, severe NYHA class, low LVEF, large brain atrophy (>10%) were significant factors as predictor of mortality (P<0.05). Interestingly, as a result of multiple analysis, only the large brain atrophy was independent predictor of mortality. Kaplan-Meier analysis resulted that the patients with the large brain atrophy as over 10% were statistically significant worse mortality than the other patients (P=0.02).

Conclusion: This is a first report to evaluate the brain atrophy area by CT in young severe HF patients. HF patients with = 10% of brain atrophy have higher mortality.
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Conclusion: This is a first report to evaluate the brain atrophy area by CT in young severe HF patients. HF patients with ≥ 10% of brain atrophy have higher mortality.