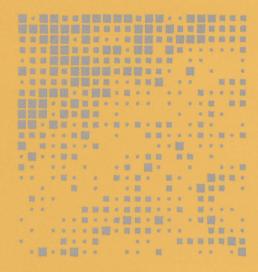
自律神経



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Abstract

Relationship between mental stress and heart rate variability Evaluation of grades of depression using power spectrum analysis

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We previously reported that the three dimensional visual information obtained by a power spectrum analysis of Holter ECG findings differs clearly between the remission and depressive stages of depressive disorders. In this study, we analyzed 31 cases with mood disorders, looking for an association between the depressive state, as evaluated using the self-rating depression scale, and autonomic nervous function, as evaluated by Holter ECG, and obtained the following results.

- 1. A significant correlation was found between the autonomous function evaluated by Holter ECG and the depressive state, evaluated by a psychological test.
- 2. In the power spectrum analysis, the attenuation of autonomic nerve activity was observed in the depressive state. The attenuation was more extensive in parasympathetic nerve activity than in sympathetic activity, and the quick rivalry ability to sympathetic nerves was impaired.
- 3. Suicidal tendencies were apparently associated with the extensive attenuation of autonomic nerve activity.
- 4. The imbalance in the attenuation of autonomic nerve activity may be the main cause of tachycardia in the depressive state.

These results suggest that a power spectrum analysis of Holter ECG findings may provide a visual psychological test to judge the depressive state objectively. This analysis may also be useful for preventing suicide attempts.

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