Does Early Diagnosis Add Real Value for the Patients with Neurodegenerative Diseases?

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Background: The neurodegenerative conditions are multifactorial pathological entities, basically triggered by an aberrant reading of genetic information during a long term interaction with a too rapidly and brutally altered environment. Despite the huge progress in their understanding, actually no cure is available. Their early detection is then crucial.

Method: Based on bibliographical data and different issues of our clinical and research experience, the presentation pleads for the crucial value of early detection for neurodegenerative pathology management.

Results: The concepts of early detection are shortly commented. Molecular medicine reshaped the old 'bio-psycho-social model': we have to screen a multifactorial disease at the interface between individual's organic susceptibility and the harmful environmental demands, especially stress and nutrition. Prediction of a multifactorial disease certainly requires integrative, 'holistic' markers, able to detect not only the behavioral, clinical, imagistic, metabolomic, cellular and molecular abnormal features, but also the sociomic and nutriomic environmental aggressions that may facilitate disease onset (Gordon E et al., 2007, Dickerson B et al, 2011, Blum S et al, 2012). Early detection is equally the crucial step of the new Predictive, Preventive and Personalized Medicine. Certain critical, financial and ethical matters related to early detection are also commented, together with people education as a critical component.

Conclusions: As the crucial step of disease management, early detection of neurodegenerative diseases becomes more and more possible and progresses grace to the continuous heuristic and technological efforts, actually targeting the interplay between the intimate, molecular susceptibility and the harmful environmental determinants.