

Positive impact from sensory stimuli in Alzheimer Disease

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Alzheimer disease is a neurodegenerative one starting with the inflammation in hippocampus region, and while illness evolves it spreads through the whole brain due to the damaging of proteins covering the neurons microtubules leading to the loss of function from neuronal circuits. It's the most common dementia among old people. In advanced cases there's no medication therapy withdrawing the degeneration forcing a non-drug treatment approach. Occupational therapy is able to activate neuronal pathways responsive to stimuli. Considering almost all cognitive functions are lost, this is the only way allowing the stimuli from central nervous system in advanced stages of the disease. It's known the contact with external environment happens through the organs of the senses. In the progressive stage of the disease all these stimuli lose significance, however sensorial paths are capable to activate neuronal circuits.

In this way the sensory stimuli in neurological deficiency could trigger a positive impact because the process of data, even within a unique sensorial modality, is simultaneously performed by several neuronal pathways anatomically different. In cases where neurons are destroyed as it happens in neurodegenerative diseases, the diverse and constant stimuli help the activity of those neurons contributing to the delay in the evolution of the disease.

The proposal of this essay is to present the relation of the cerebral structures and sensory stimuli based on 18 months-treatment of an old person with probable Alzheimer diagnosis during phase 3 of cognitive deficiency according to Allen's diagnosis model. At the beginning of the treatment the elder had excessive oral fixation, lack of attention, minimal perception of temperature and space, few verbalizations, scattered stare, lack of control of the torso. During the treatment the old person ceased the oral fixation, increased the time of attention, began spontaneous verbalization, improved the torso control and mobility likewise the perception of temperature and space. The analysis of the evolution of the treatment suggests sensory stimuli is able to activate neuronal paths and increase the sensorial perception of the old person suffering from a grave neurodegenerative disease as long as this stimuli is controlled for each individual and stage of the illness.