
第 385 回松本歯科大学大学院セミナー

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場 所: 実習館 2 階研究所セミナー室

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タイトル : The implications of pain phenomenon in some
neuropsychiatric disorders: animal models and clinical
studies

Pain in the context of psychiatric disorders is a frequently overlooked condition in clinical circumstances. Therefore, in this thesis we focused on evaluating pain reactions in different psychiatric manifestations employing either experimental or clinical situations to address this issue and at the same time to test if certain substances or activities influence this relationship.

In Alzheimer`s disease (AD) case, there were evidenced high values of pain scale scores as compared with patients without psychiatric manifestations, with increased pain sensitivity in men compared to women diagnosed with AD. Further on, augmented pain scores according to observer-assessed scales were recorded in patients diagnosed with schizophrenia compared with non-psychiatric patients. Patients suffering from depression, also, presented high pain scores in all of the applied pain scales.

Caffeine induced possible positive effects on acute thermal pain in AD animal model, but physical exercise did not indicate pain amendment in neither schizophrenia or autism animal models, on the contrary, showed increased oxidative stress in the autism animal models, although modifying the difficulty of exercise sessions might show beneficial effects. Magnesium, also, evidenced a positive influence on pain manifestations in a Parkinson`s disease animal model.

Studying neurogenesis (altered in AD and chronic pain conditions) indicated

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towards increased neurogenic activity in transgenic tau AD animal model- age 3.5 months, probably due to a mechanism trying to overcome tau hyperphosphorylation by creating more synapses in the attempt to prevent neuronal death. Regardless, no increment in mitochondrial biomass is recorded in the dendritic compartment of 3.5 months old Thy-Tau22 mice. In 7 months old tau transgenic mice, possible augmentation of somatic mitochondria fission event, along with defects in dendritic tree maturation which need to be confirmed by further studies.

Therefore, our findings indicate towards an overall distortion of pain perception in psychiatric conditions, as both experimental animal models and clinical surveys evidenced, raising awareness towards a special attention that must be dedicated to pain management in clinical psychiatric conditions.

略 歴

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