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PAIN IN PATIENTS UNDERGOING HEMODIALYSIS TREATMENT

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Patients in treatment of Acute Kidney Injury (AKI) present several complications due to the evolution of the disease, many associated with hemodialysis treatment, among the symptoms reported many complain of pain in the lower limbs, headache and discomfort during hemodialysis sessions. To analyze Nursing Diagnosis (ND) chronic pain in patients undergoing hemodialysis treatment in both clinics in Brazil. Descriptive, cross-sectional research with a quantitative approach of 100 patients undergoing dialysis treatment. 65% of these patients reported pain of chronic type. Data collection was conducted in Goias from June to August 2010 and Brasilia from January-July 2014, through the creation and application of a semi-structured instrument focusing on physical examination, characterization of ND chronic pain [NANDA (North American Nursing Diagnosis Association) - I 2015-2017], pain intensity rating (Numerical Scale - NS). Data were analyzed using SPSS 21.0 program. Approved by CEP. The sample consisted of 65 patients with mean age of 66.8 years. The pain was classified as moderate by 36.9%. The major defining characteristics were identified: Self verbal report of pain (36.9% reported as moderate, 23.1% light and 20% intense and worst possible pain respectively). Basing the numerical scale 42.6% reported changes in activities and described as intense. 79.4% had the sleep pattern changed ($p = 0.026$) and reported as moderate. The main factors related were: 100% harmful agents, 46.0% older than 50 years and 36.9% were female. The pain in patients of hemodialysis treatment is moderate and interferes in the lives of patients with changes in activities and sleep also identified in other studies.

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PROGRESSIVE BIOCHEMICAL DEFECTS DURING AGING: THEIR ATTENUATION BY SIMULTANEOUS ACTIVATION OF NRF2 AND ELEVATION OF ANTIOXIDANT COMPOUNDS

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Broadly, aging can be defined as a gradual and progressive decline in cellular functions leading to dysfunction of the organs. Decades of research on aging have identified several biochemical defects that include increased oxidative stress, mitochondrial dysfunction, chronic inflammation, impairment of proteasome and lysosomal-mediated proteolytic activity, and shortening of the length of telomeres. I propose that increased oxidative stress precedes other biochemical defects. Oxidative damaged cells initiate chronic inflammation and together with other cellular defects participate in the progression of aging. Therefore, reducing oxidative stress and chronic inflammation simultaneously may be one of rational choices for healthy aging. I propose that in order to optimally reduce these biochemical defects simultaneously, it is essential to enhance the levels, antioxidant enzymes and phase-2-detoxifying enzymes and dietary and endogenous antioxidant compound at the same time. Antioxidant compounds are increased by supplementation; however, increasing the levels of antioxidant enzymes and detoxifying enzymes requires activation of the nuclear transcriptional factor-2/ antioxidant response element (Nrf2/ARE) pathway that is impaired during aging. Transcription of Nrf2 and its binding to ARE is reduced in aged animals that are restored by antioxidant treatment. Activation of Nrf2 and antioxidant compounds also reduces chronic inflammation. I propose a mixture of micronutrients that can simultaneously activate the Nrf2/ARE pathway and enhance antioxidant compounds levels for optimally reducing oxidative stress and chronic inflammation.

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