

عنوان مقاله:

Serum Pro-oxidant-Antioxidant Balance Assay in Nurses who Working Day and Rotating Night Shift

محل انتشار:

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خلاصه مقاله:

Background: Nursing is a very stressful occupation, particularly when associated with changing shift working that may result in oxidative stress. Oxidative Stress is created by a misbalance between pro-oxidants and antioxidants towards pro-oxidants. Damage to lipids, protein, DNA, growth and cell function is obtained as result of oxidant. OS has been played an important role in many of diseases. In this study, we assessed the potential for OS by determining the pro-oxidant-antioxidant balance assay (PAB assay) in nurses who worked variable shift patterns; compared with nurses only working day shifts and a non-nurse control group. **Methods:** Sera of 44 nurses with rotating shift working (night and day) and 43 nurses working day shift only and 80 healthy subjects, who did not work shifts and were not nurses, were collected and serum PAB was measured. **Results:** A significant higher serum PAB value was observed in shift working and daytime nurses (152.28 43.64 HK) in comparison to the control group (63.64 34.41 HK index), P Value = 0.001. In day time nurses, also serum PAB between male (119.09 47.14 HK) and female (162.53 37.02 HK) in nursing workers was significant, P Value = 0.005. In the night shift working nurses, there was also a significant difference of PAB value between male (129.89 35.76 HK) and female (170.46 44.47 HK), P value = 0.002. Serum PAB between night shift workers (151.10 45.02 HK) and daytime nurses (153.44 42.66 HK) was not significant. A significant relationship was observed between serum PAB value and gender in nurses. There was no significant correlation between age and serum PAB value. **Conclusions:** The serum pro-oxidant-antioxidant balance (PAB) assay may reflect oxidative stress in nurses. Female nurses may be exposed to a greater level of oxidative stress than male nurses. In our study shift working did not affect serum PAB levels, but the PAB levels were different in male and female groups.

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