

## **P64. OXIDATIVE STRESS STATUS IN WORKERS WITH TOLUENE EXPOSURE**

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Polycyclic aromatic hydrocarbons (PAHs) are well-known group of chemical carcinogens and can cause environmental pollution. Toluene is a polycyclic aromatic hydrocarbon which is found in plastics, paints and solvents like benzene. In this study, we evaluated the association between toluene exposure and TAS (Total Antioxidant Status), TOS (Total Oxidant Status), OSI (Oxidative Stress Index) measurements in workers with toluene exposure.

The workers with toluene exposure were admitted to Ankara Occupational Diseases Hospital from 46.6 % painting (n=14), 33,3 % automotive and repair (n=10) and 20% furnishing (n=6) sectors. Oxidative stress status was evaluated using TAS, TOS, OSI markers in 30 toluene exposed workers and 30 control subjects. OSI was calculated by the  $TOS/TAS*100$  formula.

TOS levels and OSI value in toluene exposed group were significantly higher ( $p=0.017$ ,  $p=0.013$ ; respectively) and TAS levels were significantly lower ( $p=0.040$ ) than the control subjects.

Our study showed that toluene exposure cause increased oxidative stress. Taking measures to reduce exposure to toluene may reduce incidence and severity of oxidative stress based diseases like cancer, inflamatuar disease, infection and aging.