Abstract

OBJECTIVE: To determine early signs of renal injury due to occupational silica exposure. DESIGN: Cross-sectional analytical research. SETTINGS: Kenyatta National Hospital for the referent population and Clayworks ceramics, bricks and tiles factory for the assessment of occupational silica exposure. SUBJECTS: Thirty three non-smoking silica-exposed male industrial workers and 38 non-smoking male referents participated in this study. RESULTS: Silica-exposed males excreted significantly increased levels of U.TP, U.Malb, U.ALP, U.y-GT and U.LDH compared to referent males. Among the silica-exposed males, U.Si negatively correlated significantly with age, U.TP correlated significantly to each of U.ALP and U.LDH. However, no correlation was observed between work duration and U.Si. CONCLUSION: The present study shows that there is associated glomerular and proximal tubular damage among silica exposed workers which is not duration related and is seemingly subclinical and nonprogressive and urinary silica levels appears to be similar in all groups and are not affected by exposure and work duration: the reason for which is unclear.