ABSTRACT

Background: Atopic dermatitis (AD) is a chronic inflammation of the skin occurring in individuals with allergic diathesis. Reactive oxygen species (ROS) are assumed to be involved in the pathogenesis of allergic inflammation. 8-Hydroxydeoxyguanosine (8-OHdG) is a marker of oxidative DNA base damage. Previous research showed a various result in urinary 8-OHdG levels of AD in children.

Purpose: To determine urinary 8-OHdG level of children with AD in Dermatovenereology outpatient clinic at dr. Soetomo general hospital Surabaya.

Method: This is a descriptive observational cross sectional research in children with AD at dermatovenereology outpatient clinic Dr. Soetomo hospital who qualified inclusion and exclusion criteria in three months period.

Results: Mean urinary 8-OHdG level of children with AD was 17,236 ± 13,596 ng/mL. Mean urinary 8-OHdG level of AD in children with mild, moderate and severe based on grade of severity were 7,892 ± 5,596 ng/mL, 16,006 ± 13,662 ng/mL and 27,321 ± 12,668 ng/mL respectively.

Conclusions: There is a tendency of increased levels of urinary 8-OHdG in accordance with increasing grade of severity in children with AD which possibly caused by the role of oxidative stress in the pathogenesis of AD. Further research is needed to reveal the role of antioxidant in AD and the connection between the severity of AD and urinary 8-OHdG levels.

Keywords: atopic dermatitis, urinary 8-OHdG, antioxidant