

عنوان مقاله:

Association of urinary triclosan and methyl-triclosan levels with predictive indicators of cardiovascular disease and (obesity in children and adolescents in ۲۰۲۰ (case study: Kerman, Iran

محل انتشار:

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خلاصه مقاله:

Background: Exposure of children and adolescents to endocrine disrupting chemicals (EDCs) causes the development of non-communicable diseases. Triclosan (TCS) is a fat-soluble antimicrobial agent, and methyl-triclosan (MTCS) is the predominant metabolite of TCS. The increasing use of consumables TCS (toothpaste, mouthwash, personal care products) in human has raised concerns about human health. Methods: The urinary concentrations of TCS and MTCS were measured by GC/MS. Lipid profiles (TG, TC, LDL, and HDL), anthropometric parameters (WC, BMI z-score, and BMI), FBS, SBP, and DBP tests were performed on ۷۹ children and adolescents. Results: Of ۷۹ people included as the study population, ۴۲ subjects (۵۳.۱۶%) were males. Most of the study population as ۳۲ subjects (۴۰.۵۰%) were obese. The mean concentrations of TCS and MTCS in the obese population were ۵.۴۷ ± ۲.۹۹ and ۲.۳۲ ± ۱.۰۴ $\mu\text{g/L}$, respectively. After adjusting for possible confounding factors, the results showed that a one-unit increase in DBP caused a ۰.۰۳ units increase in TCS levels in male subjects ($P = ۰.۰۱$). A one-unit increase in DBP also caused a ۰.۰۲ units increase in MTCS ($P = ۰.۰۰۱$). There was a significant relationship between TCS and HDL ($OR = ۰.۹۰$, $P = ۰.۰۰۵$), LDL ($OR = ۱.۱۳$, $P = ۰.۰۱$), and TG ($OR = ۱.۰۵$, $P < ۰.۰۰۰۱$). There was also a significant relationship between MTCS and HDL ($OR = ۰.۸۸$, $P = ۰.۰۰۱$), LDL ($OR = ۱.۰۳$, $P = ۰.۰۰۹$), and TG ($OR = ۱.۰۴$, $P < ۰.۰۰۰۱$). Conclusion: According to the results, there is a relationship between TCS, MTCS, and predictive indicators of cardiovascular diseases and obesity.

کلمات کلیدی:

Triclosan, Methyl triclosan, Cardiovascular disease, Obesity, Endocrine disrupter, Children, Adolescent

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