

**Association between bisphenol (A) exposure and dilated
cardiomyopathy**

Thesis

*Submitted in partial fulfillment of
the Master Degree in Cardiovascular Medicine*

By

Moustafa Kamal Eldin Ibrahim Khalil Saad

M.B.B.CH

Faculty of Medicine

Fayoum University

2016

**Association between bisphenol (A) exposure and dilated
cardiomyopathy**

Thesis

*Submitted in partial fulfillment of
the Master Degree in Cardiovascular Medicine*

By

Moustafa Kamal Eldin Ibrahim Khalil Saad

M.B.B.CH

Under the supervision of

Dr. Khalied Ahmad Emam El-khashab

*Professor of Cardiovascular Medicine
Faculty of Medicine – Fayoum University*

Dr. Naglaa Abdel-Khalek El-Sherbiny

*Assistant professor of Public health & Community Medicine
Faculty of Medicine – Fayoum University*

Dr. Hassan Mohammed Ebeid

*Lecturer of Cardiovascular Medicine
Faculty of Medicine – Fayoum University*

2016

Abstract

BACKGROUND: Bisphenol A (BPA) has become a common environmental chemical released into food or beverage over time, especially under heat, acidic. BPA exposure also occurs in human through inhalation. Studies have suggested potential links between BPA exposure and diseases including cancer, obesity, diabetes, reproductive disorders, neuroendocrine; immune systems and Cardio-Vascular system. BPA exposure may be a risk factor for a range of CVS abnormalities as cardiomyopathies and cardiac arrhythmias. **AIMS:** This study aimed to determine serum (BPA) concentrations in patients with dilated cardiomyopathy (DCM) as well as the serum level of estradiol and testosterone compared with a healthy control group. **MATERIALS AND METHODS:** Fifty DCM patients and thirty healthy controls subjects were included. A thorough physical examination, ECG and a complete echocardiographic assessment was performed. Serum BPA levels, estradiol and testosterone were measured by using corresponding ELISA Kits. **RESULTS:** BPA was significantly more detected in the DCM groups than in the normal group (P value =0.04). Patients with DCM and detected BPA had more significant right side chambers affection (in terms of dimensions and function) and left atrial dilation (P value=0.0001 and 0.05 respectively). Atrial fibrillation was significantly detected in the DCM patients than in the normal group (P value = 0.004). Estradiol level was significantly higher in the DCM patients' than in the normal group. **CONCLUSION:** Our findings demonstrated that BPA exposure increased in DCM patients compared with healthy controls, which raise the possibility that BPA exposure might be responsible for some of the cases of dilated cardiomyopathy.

Keywords: BPA, Cardiomyopathy, Hormonal parameters.