

Joint Event

11th International Conference on

OSTEOPOROSIS, ARTHRITIS & MUSCULOSKELETAL DISORDERS &

10th INTERNATIONAL CONFERENCE ON ARTHROPLASTY

December 04-05, 2017 | Madrid, Spain

Dietary antioxidants and risk of clinical knee osteoarthritis: Is there a protective role?

Eman M Alissa, Layla S Alzughaibi, Zuhair M Marzouki and Mohammed-Salleh M Ardawi
King Abdulaziz University, Saudi Arabia

Background: Osteoarthritis (OA) is a degenerative disease of the joints that occurs commonly in female older population with the knee being the most frequently affected site of all joints. Excess oxidative damage have been associated with the pathogenesis of OA. Therefore, we aimed to explore the associations between intake levels of dietary antioxidants micronutrients and radiographic severity of osteoarthritis in females with and without clinical knee OA.

Method: One hundred female participants, aged above 40 years, with symptomatic primary knee OA were matched for age with 100 apparently healthy females in a case-control study. The study subjects were consecutively recruited from the Orthopaedics Department, Faculty of Medicine, King Abdulaziz University Hospital, Jeddah, Saudi Arabia. All subjects underwent weight-bearing bilateral anteroposterior radiography of the knee. All radiographs were graded using the Kellgren-Lawrence grading system (grades 0-4). The symptomatic severity of OA was assessed by the validated version of Western Ontario and McMaster Universities (WOMAC) index. Dietary intake was assessed using a pre-validated semi-quantitative food frequency questionnaire.

Results: Patients with knee OA had significantly lower intake levels of dietary vitamin C ($p < 0.01$), vitamin A, zinc, copper and selenium ($p < 0.0001$ in all) than their control counterparts. Additionally, WOMAC index is significantly and negatively associated with intake levels of vitamin C, vitamin A, zinc, copper and selenium.

Conclusions: These results indicate that dietary antioxidants micronutrients may have an important role in the progression of knee OA. While our findings warrant further confirmation, they highlight the potential of diet to modify the risk of osteoarthritis.

Biography

Eman M Alissa received her PhD in 2005 from the School of Biomedical and Molecular Sciences, University of Surrey, UK. Her thesis was involving micronutrient status in cardiovascular diseases. In 2015, she became the Head of the Elemental Spectroscopy Unit, in King Fahad Medical Research Center, King Abdulaziz University, Saudi Arabia. She is presently a Professor at the Clinical Biochemistry Department, Faculty of Medicine, KAU. Her research interests are: Trace elements and antioxidant vitamins status in chronic diseases, epidemiology, and aging and chronic diseases. She has published around 60 articles and attended several conferences where she presented her research work results.

Em_alissa@yahoo.com

Notes: