

높았다. 적혈구 TBARS 농도에 따라서는 혈장 IL-2와 IL-6 모두 highest quartile군이 lowest quartile군에 비해 유의적으로 높게 나타났다.

결론적으로 노인의 혈장 항산화 영양상태는 여자노인이 남자노인에 비하여 유의적으로 높았고, 연령이 증가할수록 감소하였으며, 건강관련 행위에 따른 영향을 받는 것으로 나타났다. 당뇨 및 고혈압환자의 전반적인 항산화 비타민의 섭취량, 혈중 비타민 농도 및 총 항산화능력이 질환이 없는 사람에 비해 유의적으로 높았으며, 세포성 면역을 증가시키는 cytokine으로 알려진 IL-2와 IL-6의 혈장 농도와 항산화 영양상태가 음의 상관관계를 나타내어 항산화 영양상태가 낮을수록 혈장 IL-2, IL-6의 농도가 높았다. 그러나 체내 항산화 체계는 복잡하고, 여러 가지 항산화 물질들의 상호작용에 의해 복합적으로 작용하므로 특정 영양소에 대한 효과를 조사하기에는 어려움이 있으며, 노인의 항산화 영양상태와 만성질환, 면역기능과의 관련성을 명확하게 규명하기 위해서는 질환의 진행정도에 따른 항산화 영양상태의 변화 측정 및 세포배양의 과정을 통해 mitogen에 대한 IL-2와 IL-6 농도 변화 등 더 많은 연구가 필요하다고 하겠다.

【O1-3】

Estimation of Phytochemical Intakes and Its Association with Chronic Diseases in Korean Elderly

Hae-Jeung Lee[†] · Seon Joo Park · Haymie Choi

Department of Food and Nutrition, Seoul National University, Seoul, Korea

This study was conducted to investigate the dietary phytochemical intakes and its relationship with chronic diseases in the Korean elderly. Dietary assessment was performed using a semiquantitative food frequency questionnaire (FFQ), which included 98 commonly consumed foods with actual size pictures. For estimating phytochemical intakes, we made the phytochemical database using the Korean published data and USDA references. Dietary phytochemicals studied included five carotenoids, five flavonoids, and five isoflavones. Isoflavone intakes were measured by 15 commonly consumed soy and soy products. Carotenoid and flavonoid intakes were measured by 33 and 35 foods commonly consumed, respectively.

For estimating phytochemical intakes of Korean elderly, cross-sectional study was conducted and subjects were 2,660 elderly with the mean age of 69.1 yr. The mean intakes of isoflavones, carotenoids, and flavonoids were 26.2 ± 0.33 mg/day, 10.0 ± 0.2 mg/day, and 35.7 ± 0.9 mg/day, respectively. The foods providing large amounts of isoflavones, carotenoids, and flavonoids of the Korean elderly were soybean, tofu, and soybean curd for isoflavones; carrot, spinach, and kimchi for carotenoids; onion, apple, and persimmon for flavonoid.

Phytochemical intakes were decreased by aging. The male subjects had higher intakes of isoflavones and flavonoids, whereas carotenoid intakes were not significantly different between male and female subjects. Intakes of isoflavones, carotenoids, and flavonoids were significantly lower with smoking, drinking, and doing not exercising.

The intakes of phytochemicals were higher in healthy subjects without diagnosed diseases than with diseases. There was a significantly negative correlation between a specific disease and a specific phytochemical intake. Lower genistein intake was associated with heart diseases and arthritis. β -carotene intake was significantly lower in diabetes, and the intakes of α -carotene and β -carotene were lower in cancer subjects. Flavonoid intakes were lower in elderly with arthritis.

From our results, phytochemical intakes of healthy elderly subjects, who are without disease histories, were higher than those of subjects with diseases histories. So, we recommend to consume the phytochemical rich foods for a healthy silver age.

【O1-4】

Phytochemical과 ω 3 지방산이 풍부한 식품을 이용한 노인식 개발

박선주[†] · 이해정 · 최혜미

서울대학교 생활과학대학 식품영양학과

본 연구는 노인의 영양개선을 위한 보다 실제적인 대안을 마련하기 위하여 만성질환예방에 효과가 크다고 알려진 Phytochemical과 ω 3 지방산이 풍부한 식품섭취량을 증진시키면서 균형 잡힌 영양소 섭취가 가능하도록 노인식을 개발하