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Coenzyme Q10 supplementation and health status of rheumatoid arthritis patients

Hadi Abdollahzad

Kurdistan University of Medical Sciences, Iran

Progressive cartilage and bone destruction culminates to physical disability and deteriorates health status in rheumatoid arthritis (RA). In addition to adverse effects and high costs, current therapies sometimes fail or produce only partial responses. Recently, trends toward nutritional supplements as adjunct therapies have been extended. Anti-inflammatory and anti-nociceptive effects of coenzyme Q10 (CoQ10) in the arthritis animal model have been characterized. The current study was carried out to investigate the effects of CoQ10 supplementation on health status in rheumatoid arthritis patients. In this double-blind, randomized placebo-controlled clinical trial 54 RA patients with moderate and severe disease activity score (DAS28>3.2) were selected from those referred to specialized clinics of Urmia University of Medical Sciences. Eligible participants randomly allocated to supplement or placebo groups. In addition to usual pharmacologic therapies, each patient received a 100 mg/day capsule of CoQ10 in supplemented group (n=27) or placebo in control group (n=27) for two months. Patients' demographic data were recorded at the baseline. Before and after the intervention dietary food intakes and health assessment questionnaire (HAQ) were completed through respective questionnaires. Data were analyzed using SPSS. Energy and macronutrients intake showed no significant differences within and between groups. CoQ10 significantly lowered HAQ score and led to a significant difference between two groups. It appears that oral CoQ10 supplement can be applied as an adjuvant treatment in combination with anti-rheumatic drugs. Longer clinical trials with higher doses of CoQ10 may be necessary to confirm the results of our study.

hadi_nut@yahoo.com

The treatment of end stage ankle arthritis with total ankle replacement

James K De Orio

Duke University Medical Center, USA

The replacement of the arthritic ankle with metal and plastic was first developed in the 1970s. However, significant failure of initial cemented ankle replacements discouraged surgeons and patients from pursuing this course of treatment. Now, however, prostheses used without cement have continued to evolve and are proving very reliable. With early and midterm results of newer ankle replacements reaching survival curves greater than 90%, more and more surgeons and patients are turning toward ankle replacement for relief. It has been shown that ankle replacements provide equal relief to an ankle fusion and unlike the ankle fusion, allow a significant amount of motion and do not jeopardize the subtalar and talonavicular joint nearly as much as the fusion. The two kinds of ankle replacements available for use are categorized as mobile and fixed bearing. As their name implies, mobile bearing polyethylene spacers are not fixed to either the tibial or the talar component whereas the fixed bearing ankles have the spacer fixed to the tibia. Current thought suggests the fixed bearings have the edge in terms of survivability. We have also learned to balance the ankle and to add additional hindfoot arthrodeses or ligament repair as necessary. Thus it is common to perform a lateral ligament reconstruction, gastrocnemius release, deltoid peel, subtalar arthrodesis, calcaneal osteotomy and a dorsiflexion osteotomy of the first metatarsal during the course of total ankle replacement to balance the ankle, increase range of motion and provide normal support for activities of daily living. Finally, the newest ankles have been developed to use CT scanning to create patient specific molds used at the time of surgery to ensure accurate alignment. Ankle replacements are here to stay.

james.deorio@duke.edu