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Ravichandran Subbaraj

NMC Day Surgery Centre, UAE

Serum homocysteine levels and the risk of osteoporosis

Osteoporosis is a major health problem which has devastating health consequences through its association with osteoporotic fractures. Prevention of osteoporosis by identifying the risk factors is a major challenge in the field of medicine. Elevated homocysteine level in blood can be a potential risk factor for the development of osteoporosis. We aim to study if a person with high circulating level of homocysteine has a decreased Bone Mineral Density (BMD), thus establishing an association between homocysteine and the risk of developing osteoporosis.

Method: Patients between the age group of 40-70 years attending BMD camps between July 2015 and December 2015 were included in the study. All of them underwent BMD test and blood samples were sent to the laboratory for estimation of serum homocysteine levels. The results were collected and analysed to see if there was any association between serum homocysteine levels and osteoporosis.

Results: Out of the 58 males and 20 females with normal BMD, none had elevated serum homocysteine. 21 out of the 58 males and 47 out of the 82 females with osteopenia had elevated serum homocysteine. Of the 27 males with osteoporosis, 25 had elevated serum homocysteine while among the 125 females with osteoporosis, all 125 had elevated serum homocysteine levels.

Conclusion: From our study we concluded that people with high circulating level of homocysteine had a decreased Bone Mineral Density (BMD), thus establishing an association between homocysteine and the risk of developing osteoporosis.

Biography

Ravichandran Subbaraj completed his MBBS, Diploma in Anesthesiology and then his Maser Degree in Orthopaedics in 2005 from Madurai Medical College, India. Furthermore, he also completed his Advanced Revision Arthroplasty Training at John Flynn Hospital, Brisbane, Australia and a Fellowship in Adult Joint Reconstruction at University of Göttingen, Paderborn, Germany. He has over 10 years' experience in Orthopaedics and has worked in various intuitions such as, as Professor and Chief Surgeon of Arthroplasty in the Department of Orthopaedics at the Mahatma Gandhi Medical College and Research Institute, Pondicherry, India as well as a Consultant Orthopaedic Surgeon at Apollo Hospital, Chennai, India and has been the author and reviewer of more than 20 publications in both international and national journals of repute. Ravichandran Subbaraj keen areas of interest are Complex, Primary as well as Revision Knee and Hip Replacements, Trauma Management, Arthroscopy, Sports Medicine as well as management of Osteoporosis and Vitamin D deficiency and Stem Cell Therapy for Cartilage Regeneration.Ravichandran Subbaraj is a member of Indian Orthopaedic Association and held various administrative posts in National Orthopaedic Associations. Ravichandran Subbaraj converse with his patients in English, Tamil, Malayalam, Telugu and can understand basic Hindi.

ravi53403@gmail.com

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