Knees Osteoarthritis :The Effect On General Health Score Sf-12 And Its Association With Aging Disorder Especially Cardiovascular Diseases

Abstract

The study was conducted on 75 patients who fulfilled the diagnostic criteria of knee osteoarthritis (OA) established by the American college of rheumatology and radiological finding, another control group consists of 50 subjects who had no history of knee pain or clinical signs of asymptomatic OA.

The aim of this study was to see whether OA of the knees is only an aging process or it is apart of systemic aging. Furthermore the impact of knees OA on general health score Short Form-12 (SF-12) & its association with aging disorders especially cardiovascular diseases (CVD). The parameters studied included; body mass index, hand grip strength, electrocardiography (ECG), erythrocyte sedimentation rate (ESR), C-reactive protein (CRP) and malondialdehyde and data about co-morbidities including; hypertension (HT), Hyperlipidemia, coronary heart disease (CHD), heart failure (HF), cerebrovascular accident and diabetes mellitus (DM) were obtained by questioning subjects or from clinical and laboratory evaluation of blood pressure, CHD, HF, random blood sugar (RBS), and non-fasting serum cholesterol of all patients and control individuals. In addition general health was assessed by means of (SF-12) questionnaire and the data were licensed and scored by the Quality Metric Incorporation\ Health Outcomes Scoring Software.

The results obtained from the study revealed that knee OA is age related disease and is more common in women (90.6%) than men. Obesity was present in 80% of patients while it was present in 32% of control (P<0.01) and this results confirmed the strong association between obesity and knee OA but not with overweight. Patients were significantly more likely to have high levels of comorbidities than controls (85.3% of osteoarthritic patients had co-morbid conditions, while it was present in 46% of control group, p<0.01) and the study demonstrated that CVDs (HT, HF, CHD, hyprlipidemia) being most common co-morbidities (82.6% patients had CVD while it is was found in 42% of the control, so a highly significant difference is found between patients and control, p< 0.01).

The grip strength of dominant hand was found to be much lower than control with highly significant difference (p<0.01). OA and co-morbidities such as, HT, CHD and DM considered to have great influence on patients’ outcome in this study.
The results of general health score (SF-12) showed that health status (physical composite summary scale and mental composite summary scale) of patients was worse than control with a significant statistical difference (p<0.05, p<0.01 respectively).

Conclusion: Obesity is one of the most important risk factors for OA in knee(s) and it is clearly more common in women than in men, OA associated with high levels of comorbidities and elevated inflammatory markers in which may reflect underlying chronic inflammation in patients group. Furthermore OA negatively affected the general health status and Health related quality of life of the individuals.