

A Preliminary Study on Characteristics of Patients with Primary Osteoarthritis of the Knee Undergoing Joint Replacement

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Osteoarthritis (OA) is a disease of the synovial joints and the knee is most commonly affected. OA causes pain and immobility of the patient. When other treatments fail, replacement of the joint becomes the only treatment option. It was the aim of this study to analyse the age, gender, body mass index (BMI) and the type of mal-alignment of the knee in patients undergoing knee replacements for primary OA at THP.

The Orthopaedic Unit of the Teaching Hospital Peradeniya (THP) undertakes one knee joint replacement a week and the sample consisted of 102 patients with primary OA from December 2008 to December 2010. The age, gender weight and height of the patients were recorded. Clinical examination and a weight-bearing radiograph of the knee was used to decide whether the patients' knees were varus, valgus or neutrally aligned.

There were 96 females (94.1%) and 6 males in the sample and the age ranged from 46 to 80 years with a mean of 64.2 ± 8.3 . Studies elsewhere have reported a higher mean age of over 70 years. The mean BMI of the sample was $26.59 (\pm 4.3)$ and 23 patients (22.5 %) had a normal BMI (18.5-22.9), 41 patients (40.1%) were in the overweight group (23-27.5) and 38 patients (37.2%) were found to be in the obese group (27.6-40). Sri Lankan patients have a BMI less than that recorded in OA patients in India (30) and Australia (29.7) due to the fact that the Sri Lankan population as a whole has a low BMI. However, the question whether Sri Lankan primary OA patients have a lower BMI compared to the primary OA patients elsewhere needs to be addressed.

In the study patients, 84.3% (86) had varus mal-aligned knees, 5.8% (6) were valgus mal-aligned and 9.8% (10) were neutrally aligned. It appears that varus mal-alignment is much commoner in the Sri Lankan patient compared to patients in U.S.A., U.K. and Netherlands (58 -74%).

The Sri Lankan patients appear to need knee replacement at an earlier age. Predominantly females undergo knee replacements in Sri Lanka. The BMI in the Sri Lankan patients appear to be lower than that of values for other countries. Since this is a preliminary study, further studies are necessary to prove or disprove the above observations and to find the reasons for them.