

THE ASSOCIATION BETWEEN THE WEIGHT OF DONATED FEMORAL HEADS AND THE DONORS' RACE, AGE AND GENDER

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Introduction: The increase in the use of bone allograft nowadays has led to an increase in bone donation. Donated bones can be harvested from either cadaveric or living donors. Arthroplasty surgeries of the hip comprise the main source of bone allografts from the living donors. These bones are kept in a bone bank till utilization.

Methodology: A retrospective study was conducted to categorize the ((FH) donated over the 5 years period extending from 2014-2019) according to their weight. The study aims to show the relation of the (FH) weight to race, age categories defined as (30-49, 50-69, 70-89 and >90), and gender.

Discussion: 319 (FH) were studied of which 261 were from females and 58 from males. The mean (FH) weight for all of the allografts was about $75 \pm 22.5\text{g}$. Almost 60% of the donors were Chinese followed by Indian and Malay with almost 15% for each group. Another group comprised of foreigners constituted about 10% of the donors. The age ranged between 36-93 years old with most donors in the group of 70-89 years (70.8%). The mean age of both female and male groups was almost equal. When correlating with race, the foreigner group had the highest mean (FH) weight which was about $(94.65 \pm 26\text{g})$. The Chinese group came second with about $(74.5 \pm 21.4\text{g})$ then the Indian donors $(70.8 \pm 21.\text{g})$ and Malay $(67.7 \pm 18.3\text{g})$. Regarding the age group the highest mean (FH) weight for 30-49 was $(87.65 \pm 9.1\text{g})$ and the least mean weight was from the donors more than 90 years old $(65.4 \pm 12.2\text{g})$. Female donors had lighter femoral heads $(71.8 \pm 20.\text{g})$ than male donors $(88.95 \pm 26.5\text{g})$.

Conclusion: When excluding the foreigner group; in the Malaysian society the donated femoral heads from the Chinese population were the heaviest.