

# **Anatomical Variation of Position and Location of the Fibula Nutrient Foramen in Adult Kenyans**

## **Abstract:**

Background: The fibula though transmits insignificant force in walking, is an important bone for muscle attachment and significant source of bone grafts. Objectives: To determine the position, location and number of the nutrient foramina of the fibula among Kenyans. Design: Cross-sectional descriptive study. Subjects: Two hundred right and left dry fibulas for male and female Kenyans were obtained. Setting: Department of Human Anatomy, University of Nairobi and the Osteology Department, National Museums of Kenya, Nairobi. Methods: The number and position of the nutrient foramina were determined. The distance of the nutrient foramen from the styloid process of the head and the length of the fibula were measured by a tape. The data obtained was analyzed by a computer package, SPSS 11.5.0. The means of each value was compared between right, left and the gender groups. Results: Five point five percent of fibula did not have any nutrient foramen. Most (53.4%) of the nutrient foramina were located posteriorly. The average length of the fibula was  $365\pm 30$  mm long while the nutrient foramen was located  $153\pm 24$ mm from the tip of the styloid process of the head of the fibula; it was 3 cm proximal to the mid length of the fibula. Conclusions: Fibula of 28.6 cm – 41.2 cm is available for grafting among Kenyans. The metric estimation of the position of the nutrient foramen of the fibula could assist in harvesting vascularised graft of the bone.