Osteometry of the Long Bones of Adult Chinkara (Gazella bennettii): A Remarkable Example of Sexual Dimorphism

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Abstract : The objective of this study was 1) to measure osteometric parameters of the long bones of the adult Chinkara to obtain baseline data 2) to study sexual dimorphism in the adult Chinkara through osteometry and 3) to estimate body weight from the measurements of greatest length and shaft of the long bones. For this purpose, after taking body measurements of adult Chinkara after mortality, the carcass of adult Chinkara of known sex and age were buried in the locality of the Manglot Wildlife Park and Ungulate Breeding Centre, Nizampur, Pakistan; after a specific period of time, the bones were unearthed. Various osteometric parameters of the humerus, radius, metacarpus, femur, tibia and metatarsal were measured through the digital calliper. Statistically significant (P < 0.05), differences in some of the osteometrical parameters between male and female adult Chinkara value obtained for the estimated body weight from humeral, metacarpal and metatarsal measurements were near to the actual body weight of the adult Chinkara. In conclusion, the present study estimates preliminary data on long bones osteometrics and suggests that the morphometric details of the male and female adult Chinkara have differed morphometrically from each other.

Keywords : body mass measurements, Chinkara, long bones, morphometric, sexual dimorphism

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