VIII. 13. COMPARATIVE ANATOMICAL STUDY ON THE TIBIOTARSUS OF THE OSTRICH, GUINEA FOWL, TURKEY AND DOMESTIC FOWL (GALLUS DOMESTICUS)

S. Venkatesan, O.R. Sathyamoorthy, T.A. Kannan and Geetha Ramesh
Department of Veterinary Anatomy and Histology, Madras Veterinary College, Chennai - 7.

The gross anatomical features of tibiotalus, the longest bone in all the birds were explored in the present study. Generally the tibiotalus of all the birds under study was longer than other bones of various regions. Due to the non-pneumatic nature, the bone was found very strong and compensated the shortness of the femur and made an acute angle with the femur to help in bipedal locomotion. The tibial crest was single in Ostrich and was two in number in other birds. The lateral tibial crest in the Guinea fowl formed a hook like process whereas in turkey, the crest was faint. In the cranial side of the distal extremity, proximal to the trochlea, a strong bony projection was observed in Ostrich which may be for increased leverage to the heavy extensor muscles during fast running. It was absent in other birds, instead, a bony bridge was observed which enclosed a tunnel for the passage of tendons of extensor muscles of the toe. The other distinguished gross anatomical features were compared and correlated with their functional significance.