

Comparative study on the allometric growth rate of the spinal cord in relation to the vertebral column in male and female Indian grey mongoose (*Herpestes edwardsii*)

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Abstract

Anatomical studies of the spinal cord of animals have always been of interest to the anatomist due to its high importance in various fields of veterinary and zoology. The present study was conducted to survey the quantitative and morphometric aspects of the spinal cord and vertebral column to measure the allometric growth rate in Indian grey mongoose (*Herpestes edwardsii*). For this purpose, the carcasses of 10 dead adult mongooses which had been found in Shiraz regions were used. In the following, the spinal cord structure was accurately dissected and placed in formalin 10%. In this study, the regional and total length of the spinal cord, vertebral column were measured and allometric growth rate was calculated regionally and totally. Spinal cord in adult mongoose was a cylindrical structure which was compressed dorsoventrally with an average of 292.38 ± 11.47 mm in males and 244.48 ± 10.83 mm in females. In both sexes, the thoracic, lumbar, cervical, sacral and caudal regions of the spinal cord were the longest respectively. Also in the study of the vertebral column, the caudal, thoracic, lumbar, cervical and sacral regions had the longest to shortest length respectively. Therefore, in the study of the allometric growth rate, it was found that spinal cord growth rate in the cervical and thoracic regions is more than the vertebral column and is less than in the lumbar, sacral and caudal regions. These results were extremely consistent with the findings of previous researches about the other species.

Key words: Allometric growth rate, Spinal cord, Vertebral column, Grey mongoose

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