Some aspects of the neurocraniometry of the African giant rat  
(Cricetomys gambianus Waterhouse).

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ABSTRACT  
Sixteen African giant rats (Cricetomys gambianus Waterhouse), consisting of 8 male  
and 8 female rats, were used to determine neurocranial measurements of the skulls. The  
mean neurocranial volume was 5.06 ± 0.05 mL, neurocranial length was 3.33 ± 0.08 cm, and the neurocranial height and index were 1.39 ± 0.04 cm and 41.74%, respectively. The mean whole skull length and height were 6.32 ± 0.06 cm  
and 2.98 ± 0.05 cm, respectively. The skull without the mandible was 1.83 ± 0.02 cm in height, and the skull index was 28.41 ± 0.58. The height of the skull of the African giant was approximately half (47%) of the skull length. The mean height and width of the foramen magnum were 0.78 ± 0.01 cm and 0.96 ± 0.02 cm, respectively, while the foramen index was below 100 at 81.46 ± 1.42. Parameters for  
the whole skull height and foramen magnum width showed significant difference  
between both sexes at p < 0.05. The foramen magnum showed shape variations and  
there were multiple hypoglossal foramina in over 87% of the rats. This study, in  
conclusion, highlighted the possibility of the estimation of the brain density and the use  
of the African giant rat for cranial pressure experiments.