

**ONTOGENETIC DIVERGENCE OF CRANIOFACIAL MORPHOLOGY BETWEEN TWO SUBSPECIES OF JAPANESE MACAQUE (*MACACA FUSCATA*).**

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The aim of this study is to elucidate the ontogenetic process of the divergence in craniofacial morphology between the two subspecies of Japanese macaque (*Macaca fuscata*) in prenatal period. *Macaca fuscata* consists of two subspecies, *Macaca fuscata fuscata* (Mff), and *Macaca fuscata yakui* (Mfy). Although the genetic distance of the Mfy from Mff is comparable to the degree of genetic variation among Mff, distinctive craniofacial size and shape differences have been reported. We employed a three-dimensional geometric morphometrics method which enables quantification of size and shape changes. Eighteen Mff and 14 Mfy formalin-fixed fetal specimens were used. Each specimen was CT-scanned to generate three-dimensional surface model. Ontogenetically homologous landmarks were digitized on the model to quantify the craniofacial form variation. After the generalized Procrustes analysis and principal component analysis, ontogenetic trajectory for each subspecies was calculated by regression analysis. The results demonstrated that the two subspecies generally shared the same craniofacial growth pattern and that distinctive subspecific differences were already present during the prenatal period, which indicates that the morphological divergence in the craniofacial shape may occur at a very early stage of the fetal period even between closely related subspecies.

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