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# Molecular identification of the first case of aural myiasis caused by *Sarcophaga peregrina* in an infant from Hainan, China

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**Objective:** To report a case of aural myiasis in an infant and molecular identification of larva species.

**Methods:** A larva was extricated from left external auditory canal of an infant in the Neonatal Department of the People's Hospital of Baisha County, Hainan Province on 25 June 2019. The larva was placed in 70% alcohol and sent to the Department of Pathogenic Biology, Hainan Medical University. The morphological characters of larva was observed under stereoscopic microscope. The genomic DNA of the larva was extracted and amplified by PCR targeting mtDNA cytochrome c oxidase subunit 1 gene of Diptera, then the PCR product was sequenced and analyzed.

**Results:** A 5-day-old male infant with neonatal hyperbilirubinemia became suddenly irritable. Physical examination found bleeding of the left external auditory canal. A larva about 1.0 cm×0.2 cm was found in the left external auditory canal when the left ear was cleaned with saline. The infant was transferred to Hainan Women and Children's Medical Center for further examination. Otoscopic examination found that the right external auditory canal was normal, with a small amount of yellow secretion and intact tympanic membrane. However, the left ear canal was slightly swollen, with a small amount of yellow secretion and no obvious perforation of the tympanic membrane. The child was discharged after four days of treatment with appropriate medication. Morphological characteristics observed by stereoscopic microscope implied that larva was the maggot of *Sarcophaga* sp. PCR amplification and sequencing analyses confirmed that the larva was *Sarcophaga* (*S.*) *peregrina*. The sequence exhibited 100% homology with the *S. peregrina* c oxidase subunit 1 gene (GenBank No. AF259509.1).

**Conclusions:** This is the first report of an infant with aural myiasis in Hainan Province. The molecular characteristics suggest that the aural myiasis was caused by *S. peregrina*. One of the factors causing infant aural myiasis might be residual amniotic fluid in the external auditory canal of the newborn.

**Keywords:** Myiasis; *Sarcophaga peregrina*; Infant; Molecular; Hainan

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