

# Characteristics of Imported Malaria Cases in China from 2012 to 2021

# Lijun Yang<sup>1</sup>, Longcan Zhou<sup>2</sup>, Maohua Pan<sup>2</sup>, Yucheng Tan<sup>2</sup>, Yaming Huang<sup>2</sup>, Zhaoqing Yang<sup>1, \*</sup>

<sup>1</sup>School of Basic Medicine, Kunming Medical University, Kunming, China <sup>2</sup>The People's Hospital of Shanglin, Nanning, China

#### **Email address:**

zhaoqingy92@163.com (Zhaoqing Yang) \*Corresponding author

### Abstract

Objective To analyze the characteristics of imported malaria cases in China from 2012 to 2021, aiming to gain insights into the imported malaria epidemic and formulate effective prevention and control measures accordingly. Methods Data on imported malaria cases in China over the past 10 years were collected from the relevant literature from 2012 to 2021. The number of cases, species composition, geographical distribution, and fatal cases were analyzed. The chi-square ( $\gamma^2$ ) test was used to compare case-fatality rates among regions. Results From 2012 to 2021, imported cases dominated in China, with Africa being the primary source of importation, followed by Asia. A total of 26,287 imported malaria cases (98.71% of all cases) were reported nationwide, among which falciparum malaria accounted for 64.02%, vivax malaria for 23.20%, ovale malaria for 8.96%, malariae malaria for 2.28%, and mixed infections for 1.55%. Affected by the COVID-19 pandemic, the number of imported malaria cases from 2017 to 2021 decreased by 37.37% compared to 2012-2016, with Africa (8,731 cases, 86.57%) and Asia (1,255 cases, 12.44%) remaining the primary sources of importation. From 2012 to 2019, the top five provinces with the highest number of reported cases were Yunnan (3,707 cases), Guangxi (3,018 cases), Jiangsu (2,333 cases), Sichuan (1,905 cases), and Zhejiang (1,543 cases), accounting for 51.56% of all reported cases nationwide. The top five provinces with the highest number of fatal cases were Sichuan (13 cases), Henan (13 cases), Guangdong (17 cases), Beijing (12 cases), and Shandong (10 cases), accounting for 46.43% of all reported fatal cases nationwide. Conclusion The imported malaria epidemic remains prominent, necessitating strengthened surveillance and management, improved diagnosis and treatment of imported malaria cases, and reduced occurrence of fatal cases.

## Keywords

Malaria, Imported Cases, Epidemiological Characteristics