



A Study of Malaria in the Union Territory (U.T.) of Jammu and Kashmir (J & K)

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Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

Short Communication

Received: 19/12/2022

Accepted: 26/02/2023

Published: 01/03/2023

ABSTRACT

Aim: To find out the status of Malaria in the U.T. of J & K.

Methods: The study design included an analysis of the annual reports of the National Centre for Vector-Borne Diseases Control (NCVBDC) pertaining to the years 2017 and 2018.

Results: Rajouri District in the now newly reconstituted U. T. of J & K had the highest Annual Parasite Incidence (API) of Malaria in the U.T. of 0.12 during 2017 which decreased to 0.06 in 2018.

Conclusions: If interventions like the treatment of asymptomatic carriers take place, it is expected that the API in the entire U.T. will come down sooner there.

Keywords: Malaria; Jammu; Kashmir; API.

1. INTRODUCTION

The newly reconstituted U.T. of J & K came into being on 31st October 2019. It was formed by the reorganization of the erstwhile State of J & K

into two Union Territories: the U.T. of J & K and the U.T. of Ladakh [1].

A map showing the location of the U.T. of J & K is given below:

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MAP OF UT OF JAMMU & KASHMIR AND UT OF LADAKH



Fig. 1. Map showing the Union Territory of J & K [Source: (2)]

2. MATERIALS AND METHODS

The study design included an analysis of the annual reports of the National Centre for Vector-Borne Diseases Control (NCVBDC) pertaining to the years 2017 and 2018 and a study of the document titled “National Framework for Malaria Elimination in India 2016-2030” published by the NCVBDC.

3. RESULTS

Annual Parasite Incidence (API) of Malaria is given by:

$$API = (\text{Confirmed cases of Malaria for one year} / \text{Population under surveillance}) \times 1000$$

According to the most recent data available on the NCVBDC website (data for the year 2018), the API for the erstwhile State of J & K was 0.03. In 2017, the API was 0.04. However, by going through the data, it is seen that the Malaria problem was not equally distributed between its districts; it was unequally distributed as can be seen from the following information: [3,4].

Table 1. Comparison of the API of Malaria in Erstwhile State of J & K, 2017 and 2018

| S. No. | District | API | |
|--------|--------------------|------|------|
| | | 2017 | 2018 |
| 1 | Jammu (Rural) | 0.04 | 0.03 |
| 2 | Samba | 0.01 | 0 |
| 3 | Kathua | 0.05 | 0.03 |
| 4 | Udhampur | 0.01 | 0.03 |
| 5 | Reasi | 0.02 | 0.01 |
| 6 | Rajouri | 0.12 | 0.06 |
| 7 | Pooch | 0.04 | 0.04 |
| 8 | Doda | 0 | 0 |
| 9 | Ramban | 0.01 | 0 |
| 10 | Kishtwar | 0 | 0 |
| 11 | Baramullah/Kupwara | 0 | 0 |
| 12 | Jammu (Urban) | 0.03 | 0.04 |
| STATE | JAMMU & KASHMIR | 0.04 | 0.03 |

[Source: (3) and (4)]

Table 2. No. of Malaria Cases in the Union Territories of J & K and Ladakh, 2020-2022

| S. No. | Union Territory | No. of Malaria Cases | | |
|--------|-----------------|----------------------|------|-------|
| | | 2020 | 2021 | 2022* |
| 1 | Jammu & Kashmir | 37 | 31 | 31 |
| 2 | Ladakh | 0 | 0 | 0 |

[Source: (5)] *up to October 2022

During 2019-20, there were no deaths due to Malaria in the Union Territories of J & K and Ladakh [6].

4. DISCUSSION

It is observed that there is a decline in API over the two years, but the problem is still there. Rajouri District had the highest API in the state in both the years, 0.12 in 2017 and 0.06 in 2018. The only two districts which showed infection due to *Plasmodium falciparum* in 2018 were Poonch and Jammu (Urban) with 4.35% and 3.13% respectively showing that *Plasmodium vivax* was predominant in the state [3]. But in 2017, Jammu (Urban) was the only district that had *P. falciparum* (at 4.35%) showing that the occurrence of this species in Pooch during 2018 was a new development [4].

On the occasion of World Malaria Day 2022 on 25th April 2022, a "Malaria Rath" was flagged off by the Director of Health Services of Jammu, Dr. Saleem-ur-Rehman. The "Malaria Rath Yatra" was organized by the Office of the State Malariologist, U.T. of J & K as part of an awareness drive about malaria prevention and control in the community. The year's theme was "Harness Innovation to Reduce the Malaria Disease Burden and Save Lives" [7].

The reason for absence of Malaria in the Kashmir Valley has been attributed to the altitudes being between 5000 to 6000 feet although the exact significance has not been studied [8].

Because of this also, it is not recommended for travelers to the two U.T.s take Malaria chemoprophylaxis [9]

Regarding the available infrastructure to combat Malaria, the erstwhile state of J & K, during 2009, had 116 Malaria Clinics and 211 Fever Treatment Depots (FTDs), in addition to 80 Community Health Centres (CHCs), 374 Primary Health Centres (PHCs) and 1888 Subcentres (SCs) [10].

5. CONCLUSIONS

During 2016, the Indian Government formulated the Malaria Elimination in India framework which spanned 2016 – 2030 [11]. It was founded on the World Health Organization (WHO) Global Technical Strategy for Malaria, spanning the same period, which was formulated during 2015 and updated in 2021 [12]. The goal is to reach no Malaria cases in the country by the year 2027 and then after waiting for a period of three years, the WHO can then grant Malaria-free status certification to the country in 2030.

If an approach of universal diagnosis and radical treatment is adopted in the U.T. of J & K, it is possible that the API may come down further and more quickly there especially if it must reach the target of zero cases of Malaria by 2027. This would enable the country to receive the certification of Malaria elimination in 2030.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

1. Available: [https://en.wikipedia.org/wiki/Jammu_and_Kashmir_\(union_territory\)](https://en.wikipedia.org/wiki/Jammu_and_Kashmir_(union_territory)) Accessed on 23 March 2022.
2. Press Information Bureau (PIB). Maps of newly formed Union Territories of Jammu Kashmir and Ladakh, with the map of India. Posted On: 02 NOV 2019 6:11PM by PIB Delhi. Available: <https://static.pib.gov.in/WriteReadData/userfiles/Map%20of%20UTs.pdf> Accessed on 23 March 2022
3. Government of India. Annual Report of National Vector-Borne Disease Control Programme 2018. Available: <https://nvbdcp.gov.in/Doc/Annual-Report-2018.pdf> Accessed on 25 August 2021.

4. Government of India. Annual Report of National Vector-Borne Disease Control Programme 2017.
Available:<https://nvbdcp.gov.in/Doc/Annual-Report-2017.pdf>
Accessed on 31 August 2021.
5. Government of India. Malaria Situation. 2018 to 2022 National Centre for Vector Borne Disease Control.
Available:<https://ncvbdc.mohfw.gov.in/WriteReadData/l892s/49230636891670413820.pdf>
Accessed on 24 February 2023.
6. National Health Systems Resource Centre. Health Dossier 2021. Reflections on Key Health Indicators. Jammu & Kashmir and Ladakh.
Available:https://nhsrcindia.org/sites/default/files/practice_image/HealthDossier2021/Jammu%20_%20Kashmir%20and%20Ladakh.pdf
Accessed on 24 February 2023.
7. Available:<https://www.jkinfonews.com/newsdet.aspx?q=61846>
Accessed on 24 February 2023.
8. Available:<https://www.cabdirect.org/cabdirect/abstract/19201000422>
Accessed on 24 February 2023.
9. Available:<https://www.malariasite.com/malaria-prophylaxis-india/>
Accessed on 24 February 2023.
10. National Rural Health Mission. Jammu & Kashmir State Report. 2005-2010
Available:<https://www.nhm.gov.in/images/pdf/nrhm-in-state/state-wise-information/jammu-kashmir/jnk-report.pdf>
Accessed on 24 February 2023.
11. Government of India. National Framework for Malaria Elimination in India 2016 – 2030.
Available:<https://nvbdcp.gov.in/WriteReadData/l892s/National-framework-for-malaria-elimination-in-India-2016%E2%80%932030.pdf>
Accessed on 17 September 2021.
12. World Health Organization. Global Technical Strategy for Malaria 2016 – 2030.
Available:<https://www.who.int/publications/item/9789240031357>
Accessed on 17 September 2021.