



Short Communication

A Study of Annual Parasite Incidence (API) in the Seven Districts of the Bastar Region of Chhattisgarh State

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A B S T R A C T

The seven districts of the Bastar region of Chhattisgarh state had a very high Annual Parasite Incidence (API) during 2017 and 2018. However, following the "Malaria-Mukt Bastar" campaigns being held in 2020 and 2021, it is expected that the API will come down drastically.

Keywords: Malaria, Bastar, API

Introduction

The region of Bastar occupies the southern part of the state of Chhattisgarh as shown in Figure 1.

Method

The study design included analysis of the annual reports of the Malaria Division of the National Vector Borne Disease Control Programme (NVBDCP) pertaining to the years 2017 and 2018. Also, a web search was made of all anti-malaria campaigns that were held in the Bastar region during the past five years.

Results

According to the most recent data available on the website of the NVBDCP, the API of each of the seven districts of the Bastar region for the year 2018 and that of Chhattisgarh state and India are as shown in Table 1.

Bijapur district, with an API of 53.08, besides having the

highest API in the state, also had the highest API in the whole country during 2018. Similarly, Sukma, Dantewada and Narayanpur districts, not only had the second, third, and fourth highest APIs respectively in Chhattisgarh but also the second, third, and fourth highest APIs respectively in India during 2018.²

A similar pattern was observed from the data available on the website of NVBDCP where the API of each of the seven districts of the Bastar region for the year 2017 and that of Chhattisgarh state and India were as shown in Table 2.

Bijapur district, with an API of 65.24, besides having the highest API in the state, also had the highest API in the whole country during 2017. South Garo Hills in Meghalaya had the second-highest API in the country with a value of 61.32. Dantewada and Sukma districts not only had the third and fourth highest APIs respectively in Chhattisgarh but also the third and fourth highest APIs respectively in India during 2017.³



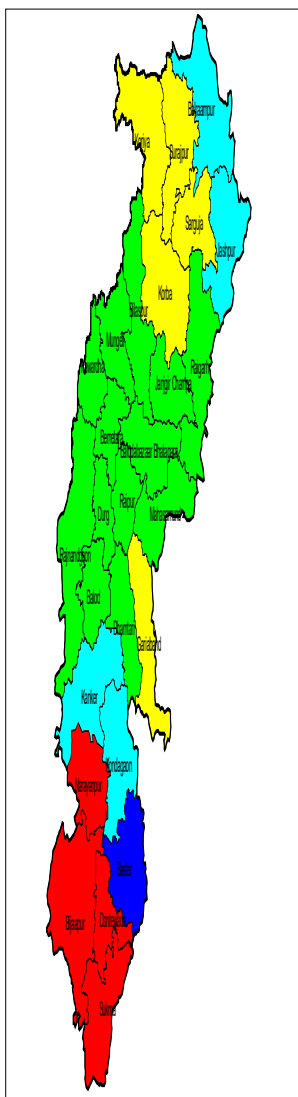


Figure 1. Map of Chhattisgarh showing the Southernly-located Seven Districts of the Bastar Region: Bijapur, Sukma, Dantewada and Narayanpur Districts in Red Colour; Bastar District in Dark Blue Colour; Kanker and Kondagaon Districts in Light Blue Colour¹

Table 1. API of the Districts of the Bastar Region, Chhattisgarh State and India, 2018²

S. No.	District	API
1	Bijapur	53.08
2	Sukma	46.51
3	Dantewada	41.45
4	Narayanpur	25.09
5	Bastar	7.91
6	Kondagaon	4.43
7	Kanker	3.02
State	Chhattisgarh	2.63
Country	India	0.32

Table 2. API of the Districts of the Bastar Region, Chhattisgarh State and India, 2017³

S. No.	District	API
1	Bijapur	65.24
2	Dantewada	55.82
3	Sukma	50.81
4	Narayanpur	43.10
5	Bastar	14.63
6	Kondagaon	13.70
7	Kanker	9.02
State	Chhattisgarh	4.92
Country	India	0.64

Discussion

It can be observed that while the districts of Bastar, Kondagaon and Kanker made remarkable progress in the one year between 2017 and 2018 in bringing down their API, the 2018 and 2017 APIs of the districts of Bijapur, Sukma, Dantewada and Narayanpur were not very much different. Whether this trend continued in 2019 is not known because the APIs for 2019 are not published yet. However, during 2020 and 2021, four rounds of “Malaria-Mukt Bastar” took place wherein every person living in each of the villages in the Bastar region had their finger pricked and a drop of blood drawn which was examined for the Plasmodium antigen using Rapid Diagnostic Kits. These campaigns detected the malarial antigen in both febrile persons and asymptomatic carriers and the most recent round was held from June 15, 2021 till July 31, 2021.^{4,5} If the diagnosis was *P. vivax*, the patient was treated with chloroquine and primaquine. If it was *P. falciparum*, treatment was by way of artemisinin-based combination therapy (ACT) and primaquine. Mixed infections were treated by ACT and primaquine. The impact was that while, in the one year preceding till November 2019, there were 5272 cases of malaria in the Bastar region, during the following year till November 2020, there were only 2696 cases i.e. there was a drop of about 49% in the number of cases.¹

Conclusion

There was some useful effect of the “Malaria-Mukt Bastar” campaign in which the reservoirs of the malarial parasite i.e. the humans, were effectively treated thereby reducing the number of persons who could be sources of infection to the female Anopheline mosquitoes. It remains to be seen whether the “Malaria-Mukt Bastar” campaign would have brought about the much-needed drop in the 2020 and 2021 APIs of Bijapur, Sukma, Dantewada and Narayanpur districts of the Bastar region.

Conflict of Interest: None

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