

SHORT COMMUNICATION

A study of Slide Positivity Rate (SPR) in three Districts of the Bastar Region of Chhattisgarh State

Arvind Nath

ABSTRACT

In Dantewada and Kanker Districts, the SPR began to rise between the 2019-20 and 2020-21 periods, despite the third phase “Malaria-Mukt Bastar Abhiyan” conducted during December 2020 and January 2021. However, in Narayanpur District, it was seen that the SPR came down following the third phase campaign. It remains to be seen as to what the effect of the Phase 4 campaign on the SPRs of Dantewada, Kanker, and Narayanpur would be. This would be possible once the SPR values for 2021-22 are available for these districts.

Keywords: Malaria, Bastar, SPR

Introduction

Bastar region is in the southern part of Chhattisgarh State. It consists of the following districts namely Sukma, Narayanpur, Kondagaon, Kanker, Dantewada, Bijapur, and Bastar. This paper will focus, however, only on Dantewada, Kanker, and Narayanpur as these are the only three districts for which data on SPR is available for the last three financial year periods namely 2018-19, 2019-20, and 2020-21.²

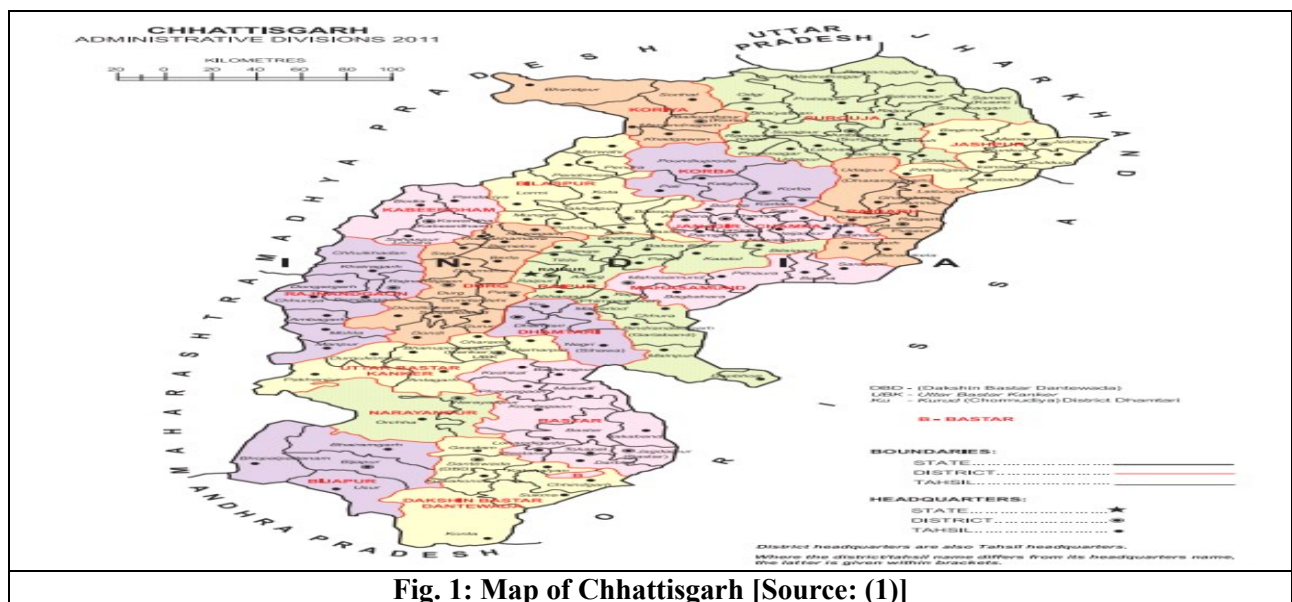


Fig. 1: Map of Chhattisgarh [Source: (1)]

1. Scientist ‘E’, National Institute of Malaria Research, Sector 8 Dwarka, New Delhi

Corresponding author: Arvind Nath, Scientist ‘E’, National Institute of Malaria Research, Sector 8 Dwarka, New Delhi;
Email ID: natha.hq@icmr.gov.in; Mobile: 9958177853

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Methods

The study design included analysis of the monthly reports of the NVBDCP available on Chhattisgarh's Department of Health website. Also, a web search was made of reports pertaining to the recently held "Malaria-Mukt Abhiyan" campaigns held in Chhattisgarh.

Results

As per the monthly reports of the NVBDCP available on Chhattisgarh's Department of Health website, the SPRs of Dantewada, Kanker, and Narayanpur districts for the three financial year periods 2018-19, 2019-20, and 2020-21 were given as follows:

Table 1. SPR of Three Districts of Bastar Region (According to Chhattisgarh Health Dept.)

District	SPR		
	2018-19	2019-20	2020-21
Dantewada	13.10	12.14	17.37
Kanker	1.27	1.55	2.49
Narayanpur	13.07	10.03	6.60

[Source: (2)]

The "Malaria-Mukt Bastar Abhiyan" campaigns were held during the following four times:

Phase 1: Jan – Feb 2020

Phase 2: Jun – July 2020

Phase 3: Dec 20 – Jan 2021

Phase 4: Jun – July 2021

In these campaigns, 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.^{3,4} If the diagnosis was *P. vivax*, the patient was given Chloroquine and, to take care of the hypnozoites, Primaquine. If the diagnosis was *P. falciparum*, treatment was by way of Artemisinin-based Combination Therapy (ACT) and, to treat the gametocytes, Primaquine.

Discussion

The impact of Phase 1 and Phase 2 "Malaria-Mukt Bastar Abhiyan" campaigns were 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 cases⁵. However, from Table 2, we see that in Dantewada and Kanker, the SPR began to rise between the 2019-20 and 2020-21 periods, meaning that, despite the Phase 3 campaign, Malaria began to rise in these districts. But in Narayanpur, it is seen that the SPR came down following the Phase 3 campaign.

Conclusions

There was some useful effect of Phase 1 and Phase 2 “Malaria-Mukt Bastar” campaigns in that the reservoirs of the Malarial parasite i.e., the humans were effectively treated thereby reducing the number of those persons who could be sources of infection to the female Anopheline mosquitoes. It is not clear why the SPR increased in Dantewada and Kanker districts after the Phase 3 campaign. Perhaps the drugs used were less efficacious or there was drug resistance. It remains to be seen as to what the effect of the Phase 4 campaign on the SPRs of Dantewada, Kanker, and Narayanpur would be. This would be possible once the SPR values for 2021-22 are available for these districts.

Conflict Of Interest: There is no conflict of interest.

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