

**ORIGINAL ARTICLE**

## PERCEPTIONS AND ATTITUDES OF RESIDENT DOCTORS ABOUT MALARIA TREATMENT AS PER NATIONAL DRUG POLICY ON MALARIA

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### ABSTRACT

**Background:** The involvement of public and private health care providers in malaria treatment, particularly understanding their knowledge and practices will aid in devising strategies to increase the rational use of antimalarial drugs. They should be aware about rationale and implement national drug policy on malaria to prevent morbidity and mortality of malaria as well as development of antimalarial drug resistance. Therefore, a study was planned on the same issue among resident doctors of a tertiary care teaching hospital.

**Objective:** To study the perceptions and attitudes of resident doctors regarding use of anti malarial drugs for treatment of all types of malaria cases in accordance with national drug policy on malaria-2010.

**Methodology:** This cross-sectional study was conducted at tertiary care teaching hospital with sixty four (64) resident doctors of medicine (24), pediatrics (24) and obstetrics (16) departments with the help of pre tested; semi-structured questionnaire based on national drug policy on malaria-2010 from 15<sup>th</sup> July to 30<sup>th</sup> August 2010.

**Results:** Only 12 (18.8%) residents were aware about drug policy. Dose and duration and indication of primaquine was known to 21 (32.8%) of resident doctors. Artesunate (49.2%) and Arteether (16.9%) were commonly prescribed in case of uncomplicated *P.falciparum* and *P.vivax* malaria.

**Conclusion:** It was noticeable that knowledge and awareness regarding drug policy among resident doctors was unsatisfactory. Regular sensitization programme on malaria drug policy should be conducted.

**Key words:** National drug policy on malaria, Resident doctors

### INTRODUCTION

The aim of the national drug policy is to guide and develop pharmaceutical services to meet the requirements of the people in the prevention, diagnosis, and treatment of prevailing diseases, using efficacious, high quality, safe and cost-effective pharmaceutical products. <sup>1</sup> Malaria is a major public health problem in India accounting for sizeable morbidity, mortality and economic loss. <sup>2,3</sup> Apart from preventive measures, early

diagnosis and complete treatment are the important modalities that have been adopted to contain the disease. <sup>6</sup> High treatment failure to Chloroquine has been detected in 228 PHCs of 44 districts in 18 states of India. <sup>4,5</sup> In view of widespread chloroquine resistance in *Plasmodium Falciparum* infection, the national drug policy <sup>6</sup> has been developed by directorate of National Vector Borne Disease Control

Programme (NVBDCP) and also revised time to time.

Main purpose of policy laid down is to provide framework of safe and effective treatment of all malaria cases and prevention among travellers and vulnerable groups keeping in view the availability of effective anti-malarial drugs. To keep the problem of drug resistance under control it is very important to follow the national guidelines on anti-malarial drug therapy at all health care levels. With this view in mind, it was planned to study perceptions and attitude of resident doctors of a tertiary care teaching hospital.

### OBJECTIVE

To study perceptions and attitudes of resident doctors regarding rational use of anti malarial drugs with their dose and duration for treatment of all types of malaria cases in accordance with National Drug Policy on Malaria-2010.

### METHODOLOGY

Study area: Study was conducted at tertiary care hospital attached with NHL Municipal Medical College, Ahmedabad.

Study design: The design of the study was interview-based cross-sectional survey.

Sampling method: The convenience sampling method was used for sample size estimation.

Study instrument: A pre tested; semi-structured questionnaire based on national drug policy on malaria-2010 was developed for collection of data. Interviews was conducted after taking verbal consent.

Study analysis: Data were entered in a microsoft excel sheet and analyzed by applying appropriate statistical tests. (Chi square and Fisher's exact test)

Study participants: Total sixty four (64) second and third year resident doctors of medicine (24), pediatrics (16) and obstetrics (24) departments of medical college hospital were requested for filling of questionnaire after taking verbal consent.

Study period: This study was carried out from 15<sup>th</sup> July to 30<sup>th</sup> August 2010.

### RESULTS

All residents had positive attitude towards the need of uniform drug policy. It was observed that 12 (18.8%) were aware about policy and among whom none was from obstetrics department. (Table 1) They all were able to answer dose and duration of Chloroquine correctly as per policy document. Regarding use of Primaquine, 21(32.8%) resident doctors were correct about dose and duration of Primaquine. (Table 1) and surprisingly only 5 (7.8%) were proficient to name the drug of choice for uncomplicated P.falciparum cases.

**Table 1: Knowledge and awareness about national drug policy for malaria**

Questions	Response			Significance
	Medicine (n=24)	Paediatrics (n=16)	Obstetrics (n=24)	
Aware of drug policy	08 (33.33)	04 (25%)	0	p > 0.05
Chloroquine dose and duration	24 (100)	16 (100)	24 (100)	
Primaquine dose and duration	10 (41.7)	6 (37.5)	5 (20.8)	P > 0.05
Drug of choice in P.falciparum cases	2 (8.3)	3 (18.8)	0	p>0.05
Drug of choice for Prophylaxis	0	0	0	-

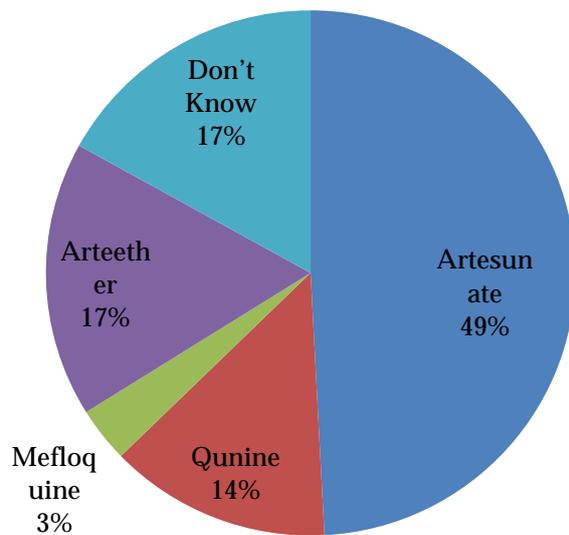
Resident doctors were not aware of different treatment for complicated and uncomplicated malaria cases. None of study participants answered right choice of drug for prophylaxis as per policy document. Artesunate (49.2%) and Arteether (16.9%) along with Quinine (13.55%) and Mefloquine (3.39 %) drugs were commonly

prescribed for both P.vivax and P.falciparum cases even in uncomplicated cases. (Figure 1). Main source of information about malaria treatment was material given by the medical representatives. However, difference in knowledge and awareness of resident doctors of

three departments were not significant statistically.

## DISCUSSION

Study results were obvious to conclude that awareness about national drug policy on malaria was low among resident doctors and treatment guidelines were not followed properly at tertiary care hospitals where complicated malaria case load is usually high. **Saurabh Srivastava**<sup>7</sup> had reported 82% diagnosed cases of complicated malaria at tertiary care hospital in his study.



**Figure: 1** Drugs answered in uncomplicated *p.falciparum* cases

Collins sayang<sup>8</sup> had revealed that only 13.6% of health professionals were informed about the new anti malaria drug guidelines in public health facilities. As pregnant females were referred to medicine department, knowledge and awareness of resident doctors of obstetrics department regarding malaria treatment and drug policy was meagre. Residents were interested in policy only as it is asked in their post graduate examinations. Artemisinin derivatives such as Artesunate, Artemether, and Arteether, prescribed as monotherapy is one of the main factors which contributes to the development and spread of resistance. Danger of spread of anti malaria drug resistance may be anticipated by these practices of resident doctors. Drugs consultative committee of central drugs standard control organization

agreed that oral single drug formulations of Artemisinin derivatives should be withdrawn from the market in a phased manner.<sup>9</sup> Findings of this study may have implications on the training, monitoring and evaluation components of malaria drug policy.

## RECOMMENDATIONS

Regular sensitization programme for malaria treatment based on drug policy should be conducted for resident doctors. This programme will enhance knowledge, change attitudes towards government drug policy as well as alter the kinds of practices that are followed for management of malaria. Views of senior faculty members on drug policy should be taken and solutions should be found out for the hurdles in implementing the same. Monitoring committee may be constituted in teaching hospital.

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