

ORIGINAL ARTICLE

STUDY OF THE PRESCRIPTION PRACTICES FOR MALARIA TREATMENT AND PROPHYLAXIS AMONG GOVERNMENT AND PRIVATE MEDICAL PRACTITIONERS IN BHAVNAGAR CITY

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ABSTRACT

Objective: The objectives of the stud were 1)to compare the prescription practices of government and private medical practitioners in malaria treatment and prophylaxis in light of guidelines prescribed by NIMR and NVBDCP; and 2) to document the mechanism used by Gujarat's health department to disseminate information regarding changes in treatment guidelines for malaria

Methods: Out of 68 government doctors 34 doctors were randomly selected to obtain detail for this study. 2 areas with comparative low API Sardarnagar and Chitra were selected and 2 areas with more API Kaliyabid and Vadva were selected for this study. Doctors of private sector serving in above area were selected randomly by lottery method. Total 54 private practitioners were selected for the study which gives 9, 15, 30 private practitioners of MD, MBBS, AYUSH respectively.

Results: A total of 88 medical practitioners were interviewed for this study who were allied with general treatment of fever cases. Out of 88 medical practitioners 34 (38.64%) work in Government & 54 (61.37%) work in private sectors. out of 34 government doctors most of 85.29% (n=29) were prescribe antimalarials according to guideline for 14 days only 41.86% (n=18) AYUSH were follow drug policy which was much less than the allopathic practitioners who prescribe according to guideline 70.97% (n=22) of MBBS and 85.71%(n=12) of MD.

Key words: Prescription Practices Drug Policy, Antimalarial Drug

INTRODUCTION

Malaria is a hemato protozoan parasitic infection transmitted by certain species of Anophline mosquitoes. According to WHO; Malaria causes about 3000 death per day in the world; Malaria kills more people than AIDS. Malaria kills in one year what AIDS kills in 15 years. About 90% of them; death occurs in Sub -Sahara Africa. The highest number of estimated cases as reported by India followed by Indonesia, Myanmar and Bangladesh in Asians countries. Malaria is one of the major public health problems of the country. Around 1.5 million laboratories confirmed cases of malaria are annually reported in India Around 50% of the total malaria cases reported is due to P.falciparum⁹. In India, about 27 percent population lives in malaria high transmission (>=1 case /1000 population) areas and about 57 percent in low transmission areas. The most affected states are north-eastern states, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, Andhra Pradesh, Maharashtra, Gujarat, Rajasthan, West Bengal and Karnataka While Orissa, Jharkhand, Chhattisgarh, West

Bengal and Madhya Pradesh are contributing more. . The Pf % has gradually increased from 39% in 1995 to 52.12% in 2010. Largest number of complicated Falciparum malaria cases and deaths indicates increasing drug resistance of Falciparum. The guidelines on 'Diagnosis and Treatment of Malaria in India (2010)' have been developed by the collaborative effort of National Vector Borne Disease Control Program, National Institute of Malaria Research and experts from different parts of the country. The aim of this Endeavour is to guide the medical professionals on the current methods of diagnosis and treatment.

OBJECTIVE

The study was conducted to compare the prescription practices of government and private medical practitioners in malaria treatment and prophylaxis in light of guidelines prescribed by NIMR and NVBDCP and also to document the mechanism used by Gujarat's

health department to disseminate information regarding changes in treatment guidelines for malaria

MATERIALS AND METHODS :

Study design: A cross sectional study was conducted with above aimed in Bhavnagar city area from June 2012 to December 2012.

Study Area: Study was conducted in Bhavnagar city area. Bhavnagar city is divided in 17 administrative wards for evaluate study objective in private sector, ward was selected as per API of ward. Two wards Kaliyabid and Vadva with more API and two wards with comparative low API Sardarnagar and Chitra were selected for this study

Sampling Technique: 1. Government Practitioners: Out of 68 government doctors 34 doctors were randomly selected to obtain detail for this study. 2. Private Practitioners: After obtaining sampling frame of private practitioners 264 private practitioners including MD (Medicine) only found to serve people. So, areas were selected according to API for this study. 2 areas with comparative low API Sardarnagar and Chitra were selected and 2 areas with more API Kaliyabid and Vadva were selected for this study. Doctors of private sector serving in Sardarnagar and Chitra were selected and 2 areas with more API Kaliyabid and Vadva were selected for this study. Areas were selected randomly by lottery method. Total 54 private practitioners were selected for the study which gives 9, 15, 30 private practitioners of MD, MBBS, AYUSH respectively. AYUSH doctors, those who say that they are not doing allopathic practice and those doctors who did not give consent for interview were excluded from the study. Pre tested, Semi structured questionnaire were use to obtain information of management pattern of practitioners of public and private sector as well. In depth Face to face interview after taking verbal consent of practitioner was taken at their practice place . Data was entered and analyzed in Epi info software version 7.

RESULTS AND DISCUSSION

As per table 1 it was found out of 34 government doctors most of 85.29% (n=29) were prescribe antimalarials according to guideline for 14 days but still

remaining 14.71% (n=5) were found not following guidelines While in private sector 55.56% (n=30) out of 54 were not prescribing anti gametocyte PQ at all in case of P. vivax which is very important to prevent recrudescence of P. vivax and those who are prescribing PQ were not for 14 days as per guidelines this factor may become reason for endemicity of malaria.

Table 1: Treatment of P. vivax according to guideline by government and private doctors

Regimen	Government (%)	Private (%)	Total (%)
CQ	5 (14.71)	30 (55.56)	35 (39.77)
CQ+PQ	29 (85.29)	23 (42.59)	52 (59.09)
ACT	0 (0)	1 (1.85)	1 (1.14)
Total	34 (100)	54 (100)	88 (100)

It was found that ignorance about following standard guideline in case of P. vivax was more among AYUSH private practitioners. Only 41.86% (n=18) AYUSH were follow drug policy which was much less than the allopathic practitioners. According to guideline correct drugs were prescribed by 70.97% (n=22) of MBBS and 85.71% (n=12) of MD.

Table 2: Treatment of P.Falciparum According To Guideline

Regimen	Government (%)	Private (%)	Total (%)
Quinine	4(11.76)	22(40.74)	26(29.55)
CQ+PQ	1(2.94)	3(5.56)	4(4.55)
ACT	29(85.29)	5(9.26)	34(38.68)
Second line Antimalarial	0(0)	20(37.04)	20(22.73)
Refer	0(0)	4(7.41)	4(4.55)
Total	34(100)	54(100)	88(100)

As per national drug policy 2012 for malaria all confirm cases of P. Falciparum should be treated with Artemisinin Combination Therapy which was replaced by other drugs previously for uncomplicated P. Falciparum malaria. This study evident that current guidelines were following in government sector majority 85.29% (n=29) public sector practitioners were prescribing ACT for uncomplicated P. Falciparum malaria while 11.76% (n=4) using Quinine

Table 3: Treatment of malaria in pregnancy according to guidelines

	P.vivax		P. Falciparum early pregnancy		P. Falciparum in late pregnancy	
	yes	no	Yes	No	Yes	no
Govt.	31(91.18)	3(8.82)	29(85.29)	5(14.71)	25(73.53)	9(26.47)
Private	37(68.52)	17(31.48)	14(25.93)	40(74.07)	3(5.56)	51(94.44)

In case of P. Vivax out of 34 govt. doctors 91.18% (n=31) prescribe according to current guidelines than only 68.52% (n=37) out of 54 private practitioners. It is clearly evident that majority of private practitioners were not following guidelines 74.07% (n=40) in case of

early pregnancy with P. Falciparum and 94.44% (n=51) in late pregnancy this difference was statistically significant

Table 4: Status of guideline provision

	Government (%)	Private (%)	Total (%)
Provided	28(82.35)	12(22.22)	40(45.45)
Not provided	6(17.65)	42(77.78)	48(54.55)
Total	34(100)	54(100)	88(100)

Only 22.22% (n=12) out of 54 private practitioner had received current drug policy by government or other professional body it is very low compared to public sector practitioners which was found 82.35%(n=28) out of 34 whereas 77.78% (n=42) private doctors not provided

CONCLUSION

Government practitioners were properly following the guidelines for malaria management while there was found lack of following guidelines in private sectors. Since AYUSH were more approached by people management of Pv or Pf was worst by them. In case of Pv 44.5% private doctors did not know importance of Primaquine in case of P.Vivax and those who were aware about Primaquine either not prescribing in proper dose or not giving it at all. This study revealed controversy result among private practitioners as 37.04% MBBS and MD private practitioners preferred 2nd line antimalarials directly in case of uncomplicated malaria. Majority 62.96% private doctors knew that CQ is the only mean for prophylaxis while 76.47% government doctors preferred CQ for this.. Most of private doctors 88.86 % were not participated in any government training program related to malaria whereas

82.35% government doctors were trained for this. 77.78% private practitioners did not provided current drug policy

RECOMMENDATIONS

The standard treatment guidelines should disseminate to private sector doctor by training, circular, Pharmaceutical companies CME program also and motivate to treat according to same guidelines. So maintain similarity and one protocol about guidelines in all sectors. Strong monitoring and supervision of private practitioners by medical audit can be useful.

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