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University of Zimbabwe

STRAND MULTIPRINT (PVT) LTD

Use of antimalarial drugs in Zimbabwe

Dear sir,

Malaria is a world-wide problem which is estimated to contribute to 2.3% of global disease[1] and is an increasing problem, particularly in developing countries.[2] In Zimbabwe, the development of widespread resistance to antimalarial drugs has been prevented through a comprehensive national malaria strategy including the development and enforcement of national guidelines for the prophylaxis and treatment of malaria. However, in recent years numerous anecdotal accounts have circulated in the private sector of failure of malaria chemoprophylaxis and treatment. This study set out to explore the use of antimalarial drug products amongst doctors and pharmacists so as to identify potential problems requiring further investigation.

A cross sectional survey (March to August 1998) using pre-tested, self-administered questionnaires was performed. Respondents were asked to report on, amongst other things, first and second choices for prophylaxis and treatment (doctors only) of malaria, and experience with "breakthrough" cases (prophylaxis failure). Questionnaires were posted to random samples of 70 doctors (10% sample) and 100 pharmacies (5% sample) throughout Zimbabwe. There was no follow up to increase response rates.

Table I: Demographic characteristics of respondents.

	Sex n (%)		Age Distribution (yrs)			
	Male	Female	21-30	31-40	41-50	50+
Doctors	11 (100.0)	0 (0.0)	1	3	4	3
Pharmacists	10 (52.6)	9 (47.4)	6	8	2	3

Responses were received from 11 doctors (15.7% response) and 19 pharmacists (19.0%). Demographic details of the respondents are shown in Table I. Amongst the 11 medical respondents, seven reported their first line choice in chemoprophylaxis against malaria as the pyrimethamine/dapsone combination (P/D; 100mg dapsone with 12,5 mg pyrimethamine) taken weekly (Figure I). Pyrimethamine/dapsone taken together with chloroquine (150 mg base) on a weekly basis was reported by two doctors. As their second line drug, four reported that they recommended chloroquine (150 mg base weekly) and proguanil (100 mg daily) (Figure II).

For the treatment of uncomplicated malaria, chloroquine was the drug of choice for nine respondents, with others recommending halofantrine, pyrimethamine/sulfadoxine (P/S) or quinine with tetracycline. Quinine was most commonly used for complicated malaria. Four doctors would wait for blood test results before initiating therapy. Seven of the doctors reported seeing cases of breakthrough malaria to P/D, chloroquine and chloroquine/proguanil. Most suspected cases (63.7%) were apparently contracted in the Zambezi Valley and Kariba. Ten of the respondents had seen malaria resistant to treatment, usually to chloroquine (over 90% of cases) but also to P/S and halofantrine. Only one respondent had sent in a blood sample to Blair Research Laboratories to confirm resistance. Biomedical journals, textbooks and lecture meetings were the most important sources of information about antimalarial drugs.

Figure I: First choice malaria prophylaxis recommended by respondents.

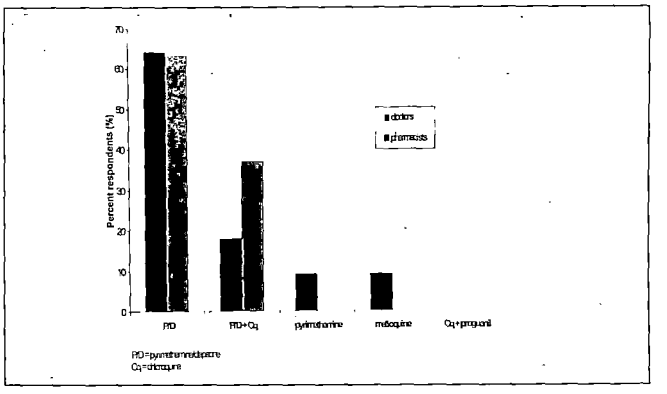
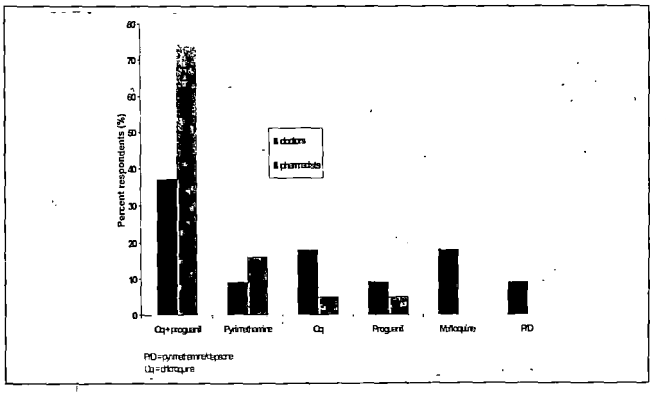


Figure II: Second choice malaria prophylaxis recommended by respondents.



From the pharmacist's questionnaire, the most frequently recommended drug for malaria prophylaxis was P/D (12 respondents) followed by P/D plus chloroquine (Figure I). As a second line prophylactic drug, almost three quarters recommended chloroquine plus proguanil (Figure II). With regard to recommendations for the use of mosquito nets, wearing protective clothing and the use of repellents, nine of the pharmacists mentioned all three of the non-pharmacological methods whilst the remainder mentioned only two. When posed with a situation of a client approaching them complaining of malaria, all but one would recommend over-the-counter treatment rather than referral. The majority of breakthrough cases had occurred

whilst the client was taking P/D (82.4%) with the remainder occurring with chloroquine alone or chloroquine plus proguanil. Fifteen of the pharmacists believed that there was resistance to the malaria prophylactic drugs. The most important sources of information were the same as for the doctors.

Although bias is present with the low response rate and self-reported rather than actual practice, the information presented is still useful in assessing knowledge and use of antimalarial drugs in Zimbabwe. Only about 60% of doctors and pharmacists followed the national standard treatment guidelines (STGs) for malaria chemoprophylaxis as found in EDLIZ 1994.[5] For second choice prophylaxis, pharmacist recommendations were generally in line with the STGs but doctors showed great variability. Of particular concern is that some recommended single drugs with resistance to those already documented in Zimbabwe.[6] The variation from the STGs may relate to concerns about drug resistance since most had reported experience with this.

The majority of doctors followed the national malaria treatment guidelines for treatment of uncomplicated malaria (chloroquine), but there was more variability for complicated malaria. This may reflect concerns about the effect of treatment failure in severe cases. Only one doctor had sent a blood sample to the Blair Research Laboratories to confirm resistance, which affects the quality of the data which the national surveillance centre is able to compile and disseminate.

With most pharmacists willing to offer malaria treatment based on clinical presentation, their ability to recognise malaria cases needs to be assessed and the national malaria committee must decide what approach they would like pharmacists to follow. The role of ancillary pharmacy staff should also be examined.

In conclusion, this study found that whilst the majority of medical practitioners and pharmacists seem to adhere to malaria policy guidelines, there would appear to be concerns of malaria resistance which need to be addressed. Studies need to be designed to investigate actual prescribing patterns and information provision by these health care providers with regard to malaria.

Acknowledgements

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