AN ASSESSMENT OF THE EFFECTIVENESS OF ARTEMISININ BASED DRUGS FIXED DOSE COMBINATION AGAINST *PLASMODIUM FALCIPARUM*, A CASE STUDY AT ASHBURN OHURU CLINIC, SIAYA DISTRICT.

BY

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A RESEARCH SUBMMITED TO THE DEPARTMENT OF PHARMACOLOGY IN THE SCHOOL OF PHARMACY IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF DEGREE OF BACHELOR OF PHARMACY OF

THE MOUNT KENYA UNIVERSITY

ABSTRACT

Malaria is an enormous problem to the population living in Siaya District and Kenya as a whole. The government has approved Artemether/ Lumefantrine (AL) as the first line therapy in the management of uncomplicated malaria. However, there is an increasing number of patients, who return to various facilities with similar symptoms or even worsening symptoms of malaria prompting ward admissions, while some result in death. The main aim of this study was to establish whether the existing artemisinin based fixed dose combination therapies are effective as recommended by the Ministry of Health. The study was based at Ashburn Ohuru clinic between June and July 2013, in which patients, during the normal treatment process, were tested in the laboratory to determine their parasitaemia levels. Microscopy for thin blood film was adopted to ensure valid results. This then was a guide on the choice of drug to the patients and after the completion of the dosage i.e. the fourth day to the eighth day, they returned for a review to establish their level of malaria parasites. The researcher used three common types of oral artemisinin in fixed dose combinations namely: Artemether / Lumefantrine(A/L), Dihydroartemisinin/Piperaquine(D/P) and Artemether/Amodiaquine(A/A)to achieve his objectives. A/L, A/A was given to patients with minimal parasitaemia (+) while D/P was given to moderate parasitaemia (+ +) . The patients age bracket preferred was between 5-45years. Again, the patients were to be without chronic illnesses e.g. Diabetes and HIV/AIDs, seriously ill patients and pregnant mothers . A chart was created in which the post test results were recorded as either negative or positive. It was found out that 44 out of 50 patients treated with A/L had negative results,42 out of 50 patients treated with D/P had negative results and 43 out of 50 patients treated with A/A had negative results. A chi square was run which showed that A/L produced 88% negative post test results, D/P produced 84% negative post test results and A/A produced 86% negative post test results .The three Artemisinin based fixed dose combination therapies were all effective. The current pattern of treatment failure experienced with the use of the above mentioned drugs is not due to their level of effectiveness but other factors which should be investigated . A/L must be repeated after 8hours for first dose and not 12hours as commonly indicated . A/A can replace A/L as first line therapy particularly in areas of high poverty index since it is more affordable but equally effective and particularly in the absence of donor funding .All malaria patients must undertake laboratory diagnosis prior to treatment with microscopy in high endemic zones .

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