Masters Thesis ABSTRACT

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Adherence to a three-day course of Artesunate/Amodiaquine for uncomplicated Plasmodium Falciparum malaria in Sierra Leone: results from 5 Peripheral Health Units in Tonkolili district

Malaria is the main morbidity in children < 5 years in Sierra Leone, as well as in many Sub Saharan countries, accounting for ca. 50 % of all consultations in health facilities.

Emerging resistance of plasmodium falciparum (PF) to Chloroquine (CQ) and subsequently Sulphadoxine / Pyrimethamine (SP) has led to increased morbidity and mortality. Currently the most effective treatment for drug resistant PF is Artemisinin combination therapy (ACT), which comprises a short acting Artemisinin and a longer acting effective antimalarial as a combination. Adherence to a three day course of two different drugs is a major concern, as non-adherence could lead to recrudescence and the early development of resistance. Therefore achieving the highest possible adherence must be the goal of ACT implementation into the health services.

In a pilot study in Tonkolili and Kambia district in the Northern province of Sierra Leone, Médecins Sans Frontières Holland (MSFH) implemented the new ACT protocol and introduced blistered packages of Artesunate/Amodiaquine (AS/AQ) into the Peripheral Health Units (PHUs) after intensive training of health staff, especially focussing on correct diagnosis of malaria and confirmation of the clinical diagnosis by Rapid Diagnostic Test (RDT). Following the implementation, a cross sectional study was performed in the MSFH supported PHUS in Tonkolili district to assess patients’ adherence to the new ACT protocol.

The objectives of the study were:

* To investigate patients’ adherence to a three-day combination of Artesunate / Amodiaquine for the treatment of uncomplicated malaria under routine conditions
* To identify possible factors associated with non-adherence
* To share the results of the implementation study with the Sierra Leone Ministry of Health and Sanitation and to give recommendations for the improvement of adherence

191 patients were selected for a home visit from the clinic registers, 187 patients were visited at home the day after finishing a three day course of ACT and interviewed in detail about their drug intake and possible factors affecting adherence or non-adherence. 185 interviews could be analysed. 172 interviewees (93%) were completely adherent, whereas 13 interviewees (7%) changed the dosing scheme for different reasons. 99 % of the interviewees recognised AS/AQ by sight and could confirm that these were the tablets prescribed for malaria, whereas only 2 % of the interviewees remembered the name of the drugs. Although the low percentage of non adherent patients made statistical analysis doubtable, a trend became obvious: The patients’ health state was better in the adherent than in the non-adherent group. The non-adherent patients or caretakers came from smaller households and had fewer children to take care of. Gender and educational level did not influence adherence.

The ACT implementation took place in Sierra Leone, a country devastated by a decade of civil war, destruction of infrastructure and a collapse of the health system. The study proves that high adherence to a three day course of ACT can be achieved in a mainly illiterate rural population after extensive training of health staff, and use of combination blister - packages. Essential steps are the drug intake of the first dose in the health facility under direct supervision, a standardised oral explanation to the patient, and the simplicity of prescription.