

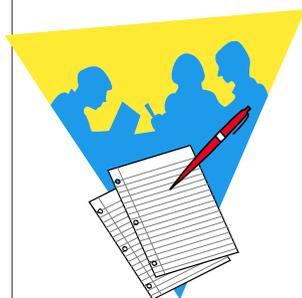
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The round table discussion on malaria: A sharing of medical notes

Prepared by: Marion Difuntorum



The research study, "Malaria in Paracelis, Mt. Province: The Human Factor," germinated to complement a DOH Integrated Regional Field Office-CAR (DIRFO-CAR) study on malaria vector in endemic areas in the Region. Its focus is on the human factor, specifically on the beliefs and practices of varied ethnic groups in Paracelis, Mt. Province.

Results of the focus group discussions (FGDs) conducted in select low, moderate and highly endemic barangays in the area mirrored a situation rooted in folk philosophy and knowledge; even as medical solutions are sparingly heeded. A valuable information gathered was the list of doctors most frequented by those who had malaria. These doctors were traced in the Isabela area and in Tabuk, Kalinga and then interviewed by the research team in December 1999. And, although an unplanned activity, the wealth of information these doctors so generously gave became the source of a plan to gather them, as malaria specialists.

The session among doctors and the research team of the malaria study, entitled "Round Table Discussion: A Sharing of Medical Notes," was primarily conceived as a sharing of notes on the disease. It was designed to compare the results (facts and myths) of the FGDs and the response of the doctors who are repeatedly approached by malaria patients. From this, it was envisioned that the differing perceptions among the interviewees and even among the doctors involved would be resolved or put into perspective; thus, a better understanding of malaria - what it is and is not. The session, held 27 February 2000, was set in Tabuk because it is the area with the most doctors treating malaria patients from Paracelis.



Participating in this noble endeavor were Dr. Jaime A. Almora and Dr. Carol D. Almora of the Almora General Hospital in Bulanao, Tabuk, Kalinga; Dr. Chandu Claver of the Kalinga Family Center in Dagupan, Tabuk, Kalinga; Dr. Inesita A. Javonillo and Ms. Charlita Mariano of the Javonillo Memorial Hospital in Cordon, Isabela; and Dr. Amelia B. Miranda of Tabuk, Kalinga, an EENT specialist and host of the weekly radio show, “*Rangtay ti Salun-at.*” There were 14 other doctors – private and government – who were invited but who were unable to come.

The Sharing of Medical Notes

Diagnosing Malaria. The doctors agreed that malaria diagnosis poses a dilemma in instances where laboratory examinations reveal varying results; and where patients exhibit malaria symptoms but are treated for other illnesses. The consensus was for the doctors to take time to probe the medical history of patients (in their dialects) complaining of fever, headache and chills. A vital question to ask is whether the patient comes from a malaria endemic area because patients do not readily volunteer information, particularly on previous treatments with other doctors. It was indicated that assuming what the patient suffers from is as dangerous as prescribing the inappropriate medication. Thus, the importance to trace the medical history of a patient; and just as equally important for a patient to indicate if he comes from an endemic area.

Fever Not a Gauge for Malaria. Dr. Javonillo has had cases where patients suffer from other diseases, even abortion, where malaria symptoms are manifested. If the patient develops fever it is assumed to be a resulting infection but tests later turn out to be positive for malaria. Dr. Claver acknowledged this and said that fever develops in times of stress like normal, spontaneous deliveries with high bleeding incidence. There are times when the malarial smear reveals a positive result so he now conducts a smear and a complete blood count test simultaneously. He does not lay blame on doctors who automatically associate fevers with a suspicion of malaria (or to even rule it out).

Dr. Javonillo cited cases of patient admissions for acute gastro-enteritis with fever. A smear is taken if the fever persists even with an acute gastro-enteritis (AGE) treatment. If positive, antimalarial treatment is commenced after the AGE. Dr. Javonillo added that malaria should always be suspected with the tandem of fever and anemia (because of hemolysis). The patient is given a complete hematology and if smear is negative but there is no response to antibiotics, antimalarials are given. In influenza, typhoid or pneumonia anemia is not present.



Relatedly, Dr. Javonillo said that malaria smears (and complete blood count [CBC]) are requested for patients coming from endemic areas. If the smear is negative for malaria and if the white blood count (WBC) is high, the fever and chills will be attributed to bacterial infection.

Accuracy of Smear Test and QBC Test. Dr. Javonillo said there should be no problem in reading smear tests if the medical technologist has been trained for this. She, herself, peers at the microscope and sees the ring-forms indicating the presence of malaria parasites (and which any trained medical technologist can detect). Thus, the accuracy of the test will depend on the medical technologist. Ms. Mariano, the medical technologist at the Javonillo Hospital, said that it is easier to use the qualitative buffy coat malaria test (QBC-MT). At times, it is difficult to see parasites in the peripheral area of blood smears. Dr. Javonillo added that one cannot almost make a mistake in the QBC test because the parasites fluoresce and the formations are seen.



Negative Malaria Results. It puzzled even the doctors why there have been cases of smears producing negative results (the reason why patients fail to return for follow-ups) but which turn out positive in subsequent smears. The best explanation is that the malaria parasites have become dormant (exo-erythrocytic stage), lodging themselves in the liver and spleen, not in the blood. This is especially true in *p. vivax* malaria. This has to be explained to the patients.

For cases with malaria-like symptoms but negative results, it is advisable to turn to the white blood count (WBC). A high count means the illness is due to other ailments, not malaria. To ascertain the diagnosis, the concerned physicians should also peer at the microscope to verify the results of the tests (because it is not true that all fever cases are malaria cases). A suggestion was for the training of medical technologists, specifically in determining examination results. The role played by these technicians was recognized as very important.

Malaria, Influenza and Exo-erythrocytic Stage. If the test result is negative and the patient has a low blood count, Dr. Jaime Almora treats this as a case of influenza. However, he does not discount the exo-erythrocytic stage of the disease. If the result is positive for 1-2 parasites in one field of the fluorescent microscope (and with manifestations of respiratory or gastrointestinal infection) the patient is given influenza treatment. The patient is then advised to expect symptoms for 3-7 days and to come back only if he develops fever and chilly sensations.

Dr. Javonillo suggested to sometimes consider the clinical diagnosis. She encounters cases in the exo-erythrocytic stage where the peripheral smear is negative but response is to antimalarials, not to antibiotics. Dr. Claver considers the shifting of symptomatology so he relies more on the laboratory procedures. He cited an instance where a case of plain headache turned to head banging. The migraine treatment did not work but the patient responded to malaria medication.



“Left and Right” Malaria Treatment. In the context of malaria control in an endemic area, the practice of giving out medication, whether malaria or not, is generally beneficial. However, in the context of patient treatment, particularly of those not afflicted with malaria, it could be detrimental because of prolonged diagnostic time and the possibility that the actual disease will get worse.

There is also a problem of over-dosage among pregnant cases, particularly among those who expect to be told that they have malaria. The transfer from one doctor to another and the varied modes of treatment can do more harm than good. There are those who request for ultrasound during the first trimester but in the Almora General Hospital, viability and a baseline study (compatibility of fetal size and fetal age) are, instead, established. Most often, the history of the patients would reveal that the fever usually falls during the expected implantation period (5-8 days after fertilization).

Antibiotics and Other Malaria Medication. Dr. Javonillo said that antibiotics for malaria are recommended in medical books, among them Oxycycline, Tetracycline and even Clindamycin (a study of Research Institute for Tropical Medicine) but which comes in very high doses, thus, very expensive. At the Javonillo Hospital, Chloramphenicol is prescribed over others because it is relatively cheaper and does not cause gastritis. Antibiotics have been observed to have an overall synergistic effect and, probably, an anti-malarial parasite effect. Dr. Claver used Tetracycline until 1997 and replaced this with Artemeter (along with chloroquine, sulfadoxine-primaquine and quinine). He also prescribes the simultaneous use of Tetracycline or Doxycycline but the constant complaint turned out to be gastro-intestinal upset. He resorts to Chloramphenicol, as it does not cause gastric irritation. Artemeter capsules, which are sourced from the Chinese artemesia, are reserved for patients of Dr. Claver who do not respond to other malaria treatments.



Dr. Javonillo uses quinolones on experiment basis on patients found positive for malaria; and whose WBC and urinalysis are normal but whose fever persists. She says these cases respond to the medication in 24 hours, thus the shorter stay in the hospital. What she intends to find out is whether quinolones have an anti-malarial parasite effect; and if these initial observations of earlier recovery with the quinolones will be consistently seen in her next cases. Sulfadoxine-pyrimethamine and Ciprofloxacin, a quinolone (500 mg daily for 5 days), are also employed as antimalarials.



Relatedly, Dr. Claver said there are still difficulties in the final diagnosis of malaria even with adequate diagnosing techniques. The challenge to doctors is posed in times when treatment options run out because there is still no discovery of new drugs. He argued that the production of malaria medicines is not economically feasible that it does not become a priority of pharmaceutical companies.

Malaria and Self-Medication. One problem facing doctors is toxicity due to self-medication. Some patients admit to taking in more than what is normally prescribed in their eagerness to hasten healing.

Dr. Almora had cases with hematonic damages to their kidneys that were manifested as renal failure. These were later found to have taken in massive doses of antimalarials because of their history with malaria. However, he cannot establish if these are actually malaria cases or renal infections manifesting as malaria. For this reason, he gives antimalarials. Thus, he cannot establish whether the massive intake of antimalarials is the very cause of renal infection; or if the damage or infection presumed to be malaria is, in fact, renal infection.

Blackwater Fever. A research paper (“Blackwater Fever: A Twelve-Year Study”), penned by Dr. Javonillo and which won the Raul Rivas Award on Tropical Medicine (May 1981) was presented. Among the findings shared was the 1940 report of Dr. Gaudencio Villanueva (DOH Division of Malaria) that indicated quinine intake as the cause of hemoglobinuria. Dr. Javonillo disputed this, saying that, in many cases, the condition is more related to primaquine intake. Further, that the complication of massive hemolysis with hemoglobinuria was familial where several family members develop this. Her study indicated that patients who develop blackwater fever have a metabolic defect called glucose-6 phosphate dehydrogenase deficiency where red blood cells become susceptible to hemolysis, considered a familial defect. She, thus, advised against using quinine treatment on a patient admitted with hemoglobinuria as this will incite anuria. She also suggested that quinine should not be given to aged patients and to those with cardiac failure and heart diseases. Quinine also causes auditory defects (tinnitus and deafness) although these are transient conditions.



Malaria Myths. Dr. Javonillo said that malaria is transmitted through blood transfusion, not through one's breath or body or sexual contact with a malaria patient. Neither is it acquired by drinking dirty water, breathing air or exposing self to sun. Rather, malaria is acquired from the bite of the female *Anopheles* mosquito.

On the whole, the sharing of medical notes revealed individual initiatives in the treatment of malaria. The private doctors in attendance have experimented on what does and does not work based on the modes of treatment they have been employing all this time. The secrets each holds were shared and discussed and became part of the research study. The contribution made by the doctors in this session, notwithstanding the existing guidelines of the Malaria Control Program, cannot be underestimated, considering that they have first hand experience in the treatment of the disease.

The results of the sharing session were echoed last April 11, 2000 during the DIRFO-CAR research dissemination forum held in Baguio City. Some findings, both from the points of view of the FGD respondents and the private practitioners did not sit well with the government doctors in attendance. However, it was explained that it was the actual findings (and wordings of the people) that were presented. The research must have been an eye-opener that originated from an independent party so considerations were made to strengthen what were found to be weak and sustain what were thought to be effective.

Similarly, the proceedings of the sharing session was furnished Dr. Antonio B. Bautista, CAR-regional malaria coordinator. The following is his commentary in its entirety.

“The standard management protocol for malaria was specifically designed for implementation by the most basic health care provider. Assessment is designed around the most cost-effective and efficient diagnostic means hinged on an alert and enhanced clinical aptitude. History and thorough physical examination accounts for 80-85% of the diagnosis with laboratory examinations, specifically direct visualization of the malarial parasite, as confirmation. While signs and symptoms for malaria may be unspecific and could be confused with other disease entities, these, in association with the patient's presence in a malaria endemic area, should be strong points for an easy presumptive diagnosis. The use of more sophisticated laboratory diagnostic modems while understandably faster does not necessarily entail addition specificity and/or reliability. Particularly in areas where malaria is predominant among the lower income groups, the use of inexpensive yet reliable means for diagnosis, in this case malarial smear, remains a standard.

As far as management is concerned, dosage has been based on the Thailand trials and recommended by the World Health Organization (WHO) based on efficacy, cost-effectiveness and convenience of use. The use of presumptive treatment was calculated with the following basic assumptions: that health personnel are fully trained on preliminary assessment and management; that an intact referral system is in place; that full adherence to the prescribed regimen is facilitated through adequate health education by personnel concerned. The concern regarding the onset of resistance following this “indiscriminate” use of anti-malarial drugs is not without basis, however. The universal prescription of the use of presumptive treatment has been made after a lengthy evaluation of its pros and cons. Our inability to properly implement this strategy is not inherent in the strategy itself but rather on deficiencies of the implementers themselves. These deficiencies could be remedied by re-training of personnel from different levels.

There were various other issues raised particularly in so far as pathology and pathophysiology is concerned. The issue on the actual cause of coma in cerebral malaria has been raised for some time. However, of late, the role of endotoxins has been accepted over cerebral edema. This particularly since a study in Thailand failed to reveal the presence of cerebral edema in cerebral malaria patients, post-mortem.

Also, on the actual causation of blackwater fever, studies have failed to actually show a direct hemolytic effect of either quinine or chloroquine. Rather, it is the interplay of G6PD deficiency with the intake of these drugs which could trigger the causation of blackwater fever. There are, to this point, however, inconclusive evidence.

These issues play a large role in the actual management of patients particularly since we aim to adopt a protocol which is the most convenient and cost-effective. Our ability to fully understand pathophysiology has a direct bearing on the therapeutics. While we post no questions as to the management protocol of our private counterparts, we do encourage them to study and understand the basis by which our protocols have been formulated.

More than anything, it is our conclusion that further collaborations and exchange of ideas have to be done between the private and government sector to come up with a holistic, effective and inexpensive means of diagnosing and managing malaria patients.”

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MARY ANN J. LADIA
Project Leader
Cordillera Studies Center, U.P. College Baguio
2600 Baguio City
Tel./Fax (63) (74) 442-57-94
Tel. No. (63) (74) 442-34-84 loc. 104
e-mail: majladia@yahoo.com

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