PAPAYA LEAF TEA AS A MALARIA PROPHYLACTIC?

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Published 2002

AN ECHO TECHNICAL NOTE

DISCLAIMER

ECHO does NOT recommend that anyone stop taking their antimalarial medicine in order to try this treatment. The only evidence for the effectiveness of papaya leaf tea in the prevention of malaria is anecdotal. No studies have been done to scientifically demonstrate its effectiveness.

INTRODUCTION: THE QUESTION

Does papaya leaf tea prevent malaria? In ECHO Development Notes Issue 69 (September 2000), we asked if any of those in our network had heard of the use of papaya leaf tea for the treatment and/or prevention of malaria. We were prompted by a question from two development workers in Indonesia who wrote to ECHO inquiring whether papaya leaves contained quinine. They wondered because tea from the leaves is widely used there in the belief that it prevents malaria. Dr. Rolf Myhrman at Judson College analyzed the bitter leaves for quinine, but found none. That does not, of course, rule out the possibility that some other chemical in the leaves may be effective.

Subsequently Dr. David Drake wrote us about the informal observations he made when he was head of a mission hospital in Zimbabwe. In the area where Dr. Drake worked, malaria is a very serious disease. The main type of malaria there is Plasmodium falciparum. Dr. Drake wrote, “We [missionaries at the station] started using papaya tea in 1990. I left the next year, but they have continued. It started out with only a few getting involved, and gradually more have caught on to its use as the years progressed. There are about 20 in the missionary family and about the same number of African staff involved. Some continued to take their regular commercial malaria prophylactic drug, but gradually none of the above took anything else but the papaya tea. Those that are still at the hospital observed that even though that area of Zimbabwe had some of the worst malaria seasons ever, that those REGULARLY taking the papaya tea (twice a week) did not come down with malaria. Short Term workers who came from the US usually continued with their malaria medication. Under the same living conditions they often DID come down with malaria. They did not drink the tea.” Dr. Drake commented in an e-mail in February, 2002, that most of the missionaries still continue to take the tea and have not gotten malaria. Many of the national staff at the hospital have a natural immunity and so do not take the tea. Instead, they seek treatment only if they come down with malaria.

Dr. Drake frequently returns to Africa on special trips. On these occasions, he takes papaya leaf tea one week before, all during, and one week after the trip. He has used papaya leaf powder bought in tea bags at health food
stores in the U.S., and has also made the tea himself using a healthy dried green papaya leaf. He wrote, “We usually prepared the tea from a quarter teaspoon or one tea bag of dried crumbled papaya leaf, in a cup of hot water. We used it twice a week. It can be sweetened to taste, as it is slightly bitter.” Dr. Drake emphasizes that in his experience, papaya leaf tea is only effective if it is taken consistently. It cannot be taken at random intervals.

ECHO does not advise anyone to stop taking their medicine and begin drinking papaya leaf tea. However, after receiving the above information, we were interested to know what our network could tell us about their own experience or observations. The questions we asked were: Do you drink the tea yourself or know people who do? How do you make the tea? How often do you drink it? Do you know of people who drink the tea regularly and still get malaria?

THE RESPONSES

We received responses from more than a dozen people. Many more people wrote to ask us what we had learned. We have compiled the information using the questions as categories.

Do you drink the tea or know someone who does?

We heard back from people in many parts of the world. Several of these have heard of papaya leaf tea and/or used it. Miriam Gebb in Ecuador wrote, “The recipe for papaya leaf tea is for prevention of malaria and has been used in Irian Jaya. They give it to school children twice a week and it has really cut down on the amount of malaria.” Fred and Paula Boley wrote to us from Brazil. “We are the only people we know who drink it regularly. We haven't had malaria since starting to drink it.” We also received confirming comments from June Walker in Malawi, Mike and Celeste Hebert in Togo, and Clarence and Twila Gillett of Irian Jaya. Donna Evans wrote that in Sulawesi, Indonesia, where she lived for nine years, local people make papaya leaf tea as a malaria preventative. She now lives in the Philippines, and said, “locals here have not heard about papaya leaf tea for malaria prevention.”

Other people wrote to tell us that they had not heard of drinking papaya leaf tea to prevent malaria. Ablam Kouwoaye, an agronomist from Togo, told us about a malaria treatment in his area that is made from several different plants including papaya. But he added, “I have never seen the use of papaya leaf tea in malaria treatment here…I want to know if the tea you talk about is prepared with green, dry or yellow leaves because green leaves are said to be toxic.” [Kouwoaye checked his sources and later wrote that green leaves “can be used without damage.” In the meantime, we looked in the book Edible Leaves of the Tropics for information about papaya leaves. It says the leaves may be cooked as a green vegetable. They should not be eaten raw because of the possible danger from both an alkaloid carpaine and the enzyme papain. Older leaves should be thoroughly boiled, changing the water at least twice. Younger leaves are not harmful. Upon cooking, the leaves have a pleasant color and retain their form and texture. They have a strong, bitter taste that is disagreeable to some people.]

Christine Wiltse also requested more information about papaya leaf tea. She wrote, “My husband and I work in Ghana, and have bouts of malaria every month. We are very curious about papaya leaves. It’s interesting, a couple that we met this year had mentioned the same preventative treatment. Many of us are sitting on the edge of our seat waiting to hear more.”

Mr. I. K. Mwende from Tanzania wrote, “The use of papaya leaf tea to prevent malaria is not known in this part of the world.”
How do you make the tea and how often do you drink it?

Several of the “recipes” we received for papaya leaf tea were very similar. The Boleys (Brazil) wrote, “We make the tea by boiling one medium size papaya leaf in two quarts of water. We drink the tea when we are going to be traveling in a malaria-infested area. We drink it intermittently here at our home in Porto Velho, though we probably should drink it regularly as there are some malaria mosquitos here. We have very few mosquitos where we live so are lax about this. When we are in the malaria-infested area, we drink it at least once a day. The minimum we drink is two tablespoons per day, although we have sort of developed a taste for it (it's very bitter) and often drink up to a cup at a time.”

Twila Gillett and her husband Clarence have served in Irian Jaya, Indonesia, for 29 years. Twila wrote that a Wycliffe (SIL) doctor told her the following “recipe” for the tea: Pick a medium-large new leaf from near the top of the papaya tree. Cut the stem off. Cut or tear it up, put it in a pan and just cover the leaf with water. Bring it to a boil. She said, “I forget what he recommended for length of time to boil, or if just to turn the burner off and let it steep for 5 minutes. I usually boil it for a few minutes and then let it steep for 5-10 minutes.” Drink 1/4 cup of the tea, either hot or cold, sweetened or unsweetened. Do this twice a week. Twila said, “I found that one medium-large leaf gives enough tea for at least two doses, so I saved the leftover for the second dose mid-week.” Laura Meitzner has visited the Gilletts in Irian Jaya and commented that a pitcher of papaya leaf tea is always stored in the refrigerator to be drunk as needed. She added that the Irianese also eat boiled, bitter-tasting papaya leaves as often as they can for the same effect.

Miriam Gebb wrote, “Cut up one leaf and add as much water as will cover it in the pan. Bring to a boil and let steep for 15 minutes. Take two ounces [1/4 cup or about 60 ml] twice a week to prevent getting malaria.”

Donna Evans, writing about Sulawesi, Indonesia, wrote, “Local people who have problems with repeated attacks of malaria will boil a couple of fresh papaya leaves and drink the water. They do this 2-3 times a week as a preventative. (I have heard that folk in Irian Jaya also have used this.) An expatriate colleague who had suffered many bouts of malaria over the years despite taking chloroquine prophylaxis (and Fansidar treatment) was advised by a doctor to try the papaya leaf tea. He did, and has been malaria free for 7 years now. The people I lived with usually eat young papaya leaves as a vegetable 2-3 times a week and have a very low incidence of malaria. Now of course, no one runs to the doctor to verify all of this in a lab. It often takes several blood smears to find it, all of which you have to pay for, so people don’t bother. They feel it’s a better use of money to just buy the medicine—or drink papaya leaf tea which is free since most people have papaya trees in their yards.”

A paper in ECHO’s files by C.K. Dresser, MD, is called “Malaria Therapy.” It was written in Indonesia in May 1994. Under the topic of “malarial prophylaxis,” Dresser wrote, “The choices are many. None is 100% sure of success.” Papaya leaf tea is listed at a dose of 50 to 60 ml, twice a week. No further details are given in that paper.

Mike and Celeste Hebert from Togo eat dried, ground papaya leaf rather than drinking papaya leaf tea. Mike wrote, “My wife and I have been taking by oral consumption a half teaspoon of finely ground dried papaya leaf twice a week (Sunday and Wednesday). She swallows hers dry and I dissolve mine in a little hot water.”

Do you know of people who drink the tea regularly and still get malaria?

Not everyone who has tried using papaya leaf tea has found it to be successful in preventing malaria. Twila Gillett wrote, “My husband has been in places where he gets more exposed to mosquitoes, so the papaya leaf prophylaxis did not hold him, and he had to move on to something else.”

June Walker from Malawi had been told that chewing half of a medium-sized papaya leaf every six months would prevent malaria. She stopped taking her regular doses of paludrine and started using papaya leaf on
October 17, 1994. She wrote, “I was fine throughout the rains but on April 16, just the day before I planned to take the next leaf, I had malaria. Thereafter I ate smaller quantities more frequently ‘listening to my body.’” June had several serious bouts of malaria since then and went back to her regular medication.

Sometimes even when papaya leaf tea has not completely prevented malaria, people have found that they experienced a greatly reduced incidence of the disease. The Heberts (Togo) ate dried, ground papaya leaf twice a week beginning in December 1999 until they wrote to us in October 2001. Mike Hebert wrote, “We have had one bout of malaria between us during the 10-month period [since we began]. During the period of June 1998 to December 1999, we experienced 12 bouts of malaria between us, without any form of malarial prophylaxis. If my math is correct that is about a six-fold drop in malaria incidence, that can only be accounted to the use of papaya leaf.” In a later correspondence, He wrote, “With this [malarial prophylaxis regime] we have been malaria free now for almost two years.”

Twila Gillett said, “We have taken a number of prophylactic regimes for malaria, and I have taken papaya leaf tea quite successfully for nearly 10 years. (I possibly have had 2 break-throughs [incidents of malaria despite taking meds] in that time). Our TEAM doctor has not been recommending it, so I want you to understand that I cannot encourage you to take this prophylaxis regime, but can only tell you what I have done.” Twila stressed that there is no scientific formula or precise recipe for making papaya leaf tea.

Two letters that came to us suggested that papaya leaf tea could be used as a treatment for malaria. David Roscoe from Australia told us about a man whose five-year-old daughter had malaria. The man gave her papaya leaf tea to drink, and said that the next day the malaria had gone.

Joshua Okinyi Amara in Tanzania also wrote to us about papaya leaf tea. “We have tried it several times in the most rural areas where we reach people and the response has been positive. When taken one glass, three times a day for 3 to 5 days, the malaria is all gone. It works and we thank God for who so ever came out in our situation with the idea. It is really helping because it is free and it is a miracle.”

We are still looking for more information. As mentioned in EDN, a laboratory analysis showed that quinine was not present in papaya leaves, despite the bitter taste of the leaves and tea. Andrew Hanibelsz, a journalist based in Hong Kong, suggested in a recent e-mail (June 2002) that papaya leaf tea might act as a mosquito repellant. He received the following information from a vet who has worked on numerous islands in Indonesia and with many different populations. Andrew said that the tea works because the active compound is perspired through the skin, and that an unpleasant bitterness can be tasted on the skin as a result. He warned that papaya leaf tea may possibly cause liver damage after prolonged use, so the people he works with only use it when they go into the forest. Andrew also advised that sugar should be avoided in malaria areas, as sweet sweat is said to attract mosquitoes.

We would like to hear from more people. In their e-mail, Fred and Paula Boley told us, “A few years ago, SIL came out with a publication by one of their missionaries in the Philippines who discovered a tribe that didn’t get malaria while others around were getting it. They found that the tribe members were drinking this tea. It would be good if you could contact SIL to get a copy of this article. I don't have the specifics on it.” Have any of you heard of the publication mentioned here? We have tried to locate it with no success.

As an interesting aside, Twila Gillett commented that as far as she knows, effectiveness of the papaya leaf tea does not depend on whether the tree is male or female.