LETTERS TO THE EDITOR

Curcumin—A Natural Herb With Anti-HIV Activity

To the Editor:

In Trinidad, those of African descent are more likely to contract human immunodeficiency virus (HIV) than the Indian population despite similar risks and behavior patterns. Two food additives that are components of curry may be one of the factors accounting for the difference in infection rates between these two groups.

Curcumin is one of these food additives and has been studied by the Harvard Medical School for its antiviral properties. There is also anecdotal evidence that curcumin may be an effective agent against HIV-1. It was determined that curcumin inhibits transcription through inhibition of the long terminal repeat region of the genetic material of HIV.

One individual with an elevated P24 ingested 2.5 g of curcumin a day. His P24 was repeated 7 days later. In this short period of time, there was a substantial drop in the P24 antigen (a measure of viral activity). Curcumin also has been studied by AIDS Research Alliance, a community-based clinical trials group in Los Angeles.

Preliminary data from patients who have access to curcumin suggest a strong anti-HIV activity. These data lay the ground work for new studies.

CASE HISTORIES

Three patients, A, B, and C, are all homosexual men >20 years. Patients A and B are taking no anti-HIV medicines, and patient C has been taking a regimen of azidothymidine/3TC, trimethoprim sulfamethoxazole, fluconazole, clarithromycin, and isoniazid for more than 8 months. All three had PCR-RNAs drawn before starting 1 g curcumin three times daily. They were instructed to take it with meals, and no milk or milk products. A second PCR-RNA was drawn 8 weeks later (Table 1).

TABLE 1. PCR-RNA RESULTS

Patient	Initial	8 Weeks
A	112,000 copies	10
B	65,000 copies	<10
C	246,000 copies	26,000 copies

TABLE 2. PROPOSED CURCUMIN STUDY GROUPS

Group	Regimen
Study I: Patients With CD4 Counts >350 & <500	
A	Controls (no curcumin or azidothymidine)
B	Curcumin only
C	Azidothymidine only
D	Curcumin & azidothymidine
Study II: Patients With CD4 Counts >100 & <350	
E	Azidothymidine only
F	Azidothymidine & curcumin
G	Azidothymidine & 3TC
H	Azidothymidine & 3TC plus curcumin

The data in Table 1 suggest a strong anti-HIV effect. We believe this is real because with time, there is also a slow rise in CD4 counts. Several questions remain to be answered:

- How long does this anti-HIV activity remain, and does HIV develop resistance?
- Does this slow the progression of HIV?
- Can its benefit be augmented by the addition of antiretrovirals and protease inhibitors?

Further study is indicated here. To answer some of these questions, two trials will be conducted at King-Drew Medical Center involving 60 patients. Twenty patients with CD4 counts >500 will participate in Study I. Polymerase chain reaction quantification will be done on all patients at 0, 1, 3, 6, and 12 months. Half of these patients will receive curcumin at baseline and the other half will start in 3 months. This will allow all participants to receive the herb and allow us to evaluate the ability of this substance to lower the viral load.

Study II will assure the benefit hoped to be proven in Study I. Given that, 60 patients will be randomly distributed in 6 groups of 10 as listed in Table 2. We will report on the outcomes of these studies.

We intend to examine this natural product from the turmeric plant in 30 individuals who are HIV positive over 6-month surrogate markers P24 antigen and RNA by PCR.

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