Rifampin and AFB: Yes or No?

To the Editor:

In an article, "Antimicrobial activity of antituberculosis agents against anaerobic bacteria," in the May 1979 issue of Chest (75:560-570) Thadepalli et al have left the reader in confusion by opposing statements in the body of the paper and in the summary. In the body of the paper: "Rifampin therefore appears to be an ideal antibiotic for the treatment of anaerobic pulmonary infections associated with tuberculosis." In the summary: "Therefore, when tuberculosis is suspected, -rifampin (should be) withheld until the acid-fast bacilli are demonstrated by additional diagnostic procedures."

The concern of these authors is that an anaerobic infection may be interpreted as tuberculosis because of a favorable response to therapy if rifampin (RIF) is included in the initial regimen. This is of less concern to me than withholding the best regimen from the patient simply in order to avoid a slight confusion in an occasional patient. No self-respecting tuberculosis program counts their clinical diagnoses of tuberculosis (unconfirmed by culture) as anything but possible cases. But, if RIF and INH are not given to patients with cavitary tuberculosis from the outset, it will cancel much of the effectiveness of the RIF-INH regimen for short-course therapy. At least some of the cases will develop INH resistance during the period of less effective therapy with INH-EMB. If this happens and then RIF is added or substituted for ethambutol (EMB) when a positive culture is reported, one can expect the development of RIF resistance in those patients who have developed INH resistance during therapy with INH-EMB and the salutary effects of short-course therapy cannot be realized.

A far and away better approach, it seems to me, is to use RIF-INH from the start in TB suspects and to limit therapy to nine months, whether it is all given on a daily basis or most of it twice-weekly as we have reported in the April issue of Chest. The diagnosis of tuberculosis should be made definitively only if it is confirmed bacteriologically. In the meantime, if some patients recover from an anaerobic infection due to the RIF, what harm has been done? Well it is well.

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To the Editor:

Dr. Stead obviously misinterpreted our recommendations. As stated in our paper, we believe rifampin to be an ideal drug for the treatment of patients with tuberculosis (minimum initial requirement being the presence of acid-fast bacilli on sputum smear), as stated in our article in Chest. We do not believe rifampin should be used in patients with suspected but undiagnosed ("smear-negative") tuberculosis. We do not believe these two statements to be contradictory. We do not recommend withholding rifampin therapy for the treatment of patients with tuberculosis.

Therapy with INH-RIF does have an increased incidence of serious side effects. Even in Dr. Stead's study of 185 patients, six developed jaundice and one had thrombocytopenia (3 percent). Although such a low incidence might be acceptable in treating patients with known tuberculosis, it is unacceptable in treating patients without that diagnosis established—particularly when a safer and just as effective combination of therapy is available for "covering" patients with suspected tuberculosis until the diagnosis is bacteriologically proven.

We are unaware of any data indicating that such a regimen, ie, INH and EMB, for treating "smear-negative" tuberculosis is less effective than INH-RIF. The incidence of INH resistance developing in such patients ("smear-negative" patients on INH-EMB therapy) until cultures become available (six to eight weeks) is close to, if not, zero. If Dr. Stead has data to the contrary, we would be interested in such documentation.

In patients with known pulmonary tuberculosis associated with anaerobic lung infection, rifampin does appear to be an ideal drug. However, we believe the use of rifampin to treat patients with suspected tuberculosis ("smear-negative") is not warranted for two reasons. First, the increased toxicity is not warranted for the treatment of an unknown infection which may prove not to be tuberculosis and, second, the clinical response to rifampin in such patients may be confusing. We believe the diagnosis of tuberculosis should be established at least by a positive sputum smear and an appropriate clinical picture before initiating therapy which has an increased incidence of potentially serious side effects. We do not believe this involves only an occasional patient.

We agree with Dr. Stead that the diagnosis of tuberculosis ultimately depends upon confirmation by culture. However, we disagree with Dr. Stead that in a large urban general hospital, patients suspected of having tuberculosis who subsequently are proved bacteriologically not to have tuberculosis represent only "an occasional patient." In our 300-bed county hospital, chronic, necrotizing, subacute anaerobic lung infections are frequently misdiagnosed as probable tuberculosis initially (and vice versa). In addition, nontuberculous bacterial and tuberculous infections frequently coexist (18 of 128 patients with tuberculosis, or 14 percent, in our recently reported series).† Certainly, the patients with smear-negative sputum for acid-fast bacilli and pulmonary cavitation, more aggressive diagnostic tests, eg, TTA or fiberoptic bronchoscopy with brushings, are indicated. If sputum is still smear-negative for acid-fast bacilli, INH-RIF therapy is not indicated. If tuberculosis is still suspected, a less toxic and probably equally effective drug regimen, ie, INH-EMB, is indicated until results of cultures are available.

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REFERENCES

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