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A M E R I C A N C O L L E G E O F



P H Y S I C I A N S[®]

Ofloxacin and Pulmonary Tuberculosis

To the Editor:

We read with great interest the article by Kohno et al published in the December, 1992, issue of *Chest* concerning the comparison of ofloxacin and ethambutol in the treatment of pulmonary tuberculosis.¹ We wish to supplement and reiterate on several issues concerning the potential role of ofloxacin for the treatment of pulmonary tuberculosis.

As referenced by the authors, ofloxacin has distinct activity against intracellular *Mycobacterium tuberculosis*.² It is also well known that ofloxacin, like other fluoroquinolones are well concentrated within alveolar macrophages.³ Thus it is likely that ofloxacin like pyrazinamide has sterilizing capacity, which is a drug characteristic that contributes to the success of short-course chemotherapy. Indeed, this issue has been explored in another study, though comparing ciprofloxacin (rather than ofloxacin) with pyrazinamide.⁴ In that study, all patients received 6 months of daily rifampicin and isoniazid with either 2 months of ethambutol and pyrazinamide or 4 months of ciprofloxacin. There has been a rapid fall in culture positivity in the standard regimen group and a more gentle decline in the ciprofloxacin group. However, this does not reach statistical significance. The other aspects that warrant investigation are the early bactericidal effects and the prevention of emergence of resistance.⁴ Concerning adverse reactions, from the finding of Kohno and coauthors,¹ it does seem that ofloxacin is as well tolerated as ethambutol with particular reference to the liver. We have lately reported the relatively good tolerance of ofloxacin in 29 patients with hepatic dysfunction and pulmonary tuberculosis.⁵ This property might be unique to ofloxacin because it is normally handled almost exclusively by renal clearance though changes secondary to hepatic dysfunction have not been completely unraveled.⁶ We also concur with Kohno and co-authors that ofloxacin might have a place in the treatment of multidrug resistant pulmonary tuberculosis. In addition to our earlier report,⁷ we have treated another 12 patients with bacilli resistant to at least streptomycin, isoniazid, and rifampicin *in vitro* with ofloxacin. Two patients received 400 mg ofloxacin once daily. Ten patients received 600 mg to 800 mg ofloxacin once daily. Other accompanying drugs used include kanamycin, ethionamide, cycloserine, ethambutol, and pyrazinamide depending on guidance provided by *in vitro* susceptibilities. All 12 patients achieved culture conversion within 4 months of commencement of chemotherapy.

Wing Wai Yew, M.B., F.C.C.P.,
Poon Chuen Wong, M.B., F.C.C.P.,
Joseph Lee, M.B., F.C.C.P., and
Chi Hung Chau, M.B.,
Tuberculosis and Chest Unit,
Grantham Hospital,
Hong Kong

Reprint requests: Dr. Yew, Grantham Hospital, 125 Wong Chuk Hang Rd., Aberdeen, Hong Kong

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To the Editor:

Various fluoroquinolones have been studied for their *in vivo* activities against *Mycobacterium tuberculosis*. Only a few clinical trials of fluoroquinolones, however, were reported. The clinical study comparing ciprofloxacin and pyrazinamide did not show any statistically significant difference. The result was similar to our clinical study that compared ofloxacin and ethambutol, probably because of the strong antituberculous activity of rifampicin and isoniazid.

Sparfloxacin, which is a newly developed fluoroquinolone in Japan, reveals more potent antituberculous activity than any other quinolones. Ninety percent of minimum inhibitory concentration of sparfloxacin against *M tuberculosis* is 0.2 µg/ml, and its *in vivo* activity against murine tuberculosis is six to eight times stronger than ofloxacin. Sparfloxacin is expected as the new rifampicin. We treated four patients with atypical mycobacteriosis with sparfloxacin, but photosensitivity was observed in two patients. These data convinced us that ofloxacin is still useful for the treatment of mycobacterial infection because of its good tolerance.

Shigeru Kohno, M.D., F.C.C.P.,
National Institutes of Health,
Bethesda, Maryland

Reprint requests: Second Department of Internal Medicine, Nagasaki University, 1-7-1 Sakamoto-Machi, Nagasaki, 852, Japan.

Assessing Exercise-induced Bronchospasm

To the Editor:

We read with great interest the study by Haas et al,¹ which appeared in the January 1993 issue of *Chest*. The authors advocate the use of the entire maximum expiratory flow volume (MEFV) curve in determining presence or absence of exercise-induced bronchospasm (EIB). There are several points we would like to emphasize and comment on.

Haas et al¹ state that it is misleading to use an arbitrary reduction in a single forced expiratory airflow parameter (for example FEV₁ or PEF_R) to diagnose EIB. Furthermore, the use of arbitrary criteria has already been condemned as unacceptable.² In

Table 1—Response to Exercise in the Group of 70 Atopic Asthmatic Children

	FVC	FEV ₁	FEF _{25-75%}	PEFR	FEF ₂₅
% of resting value	87.73	72.93	54.46	72.87	52.79
(mean and SD)	(14.04)	(16.26)	(19.69)	(18.84)	(22.55)
% of responders	42.86	88.57	85.71	70.00	68.57

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