

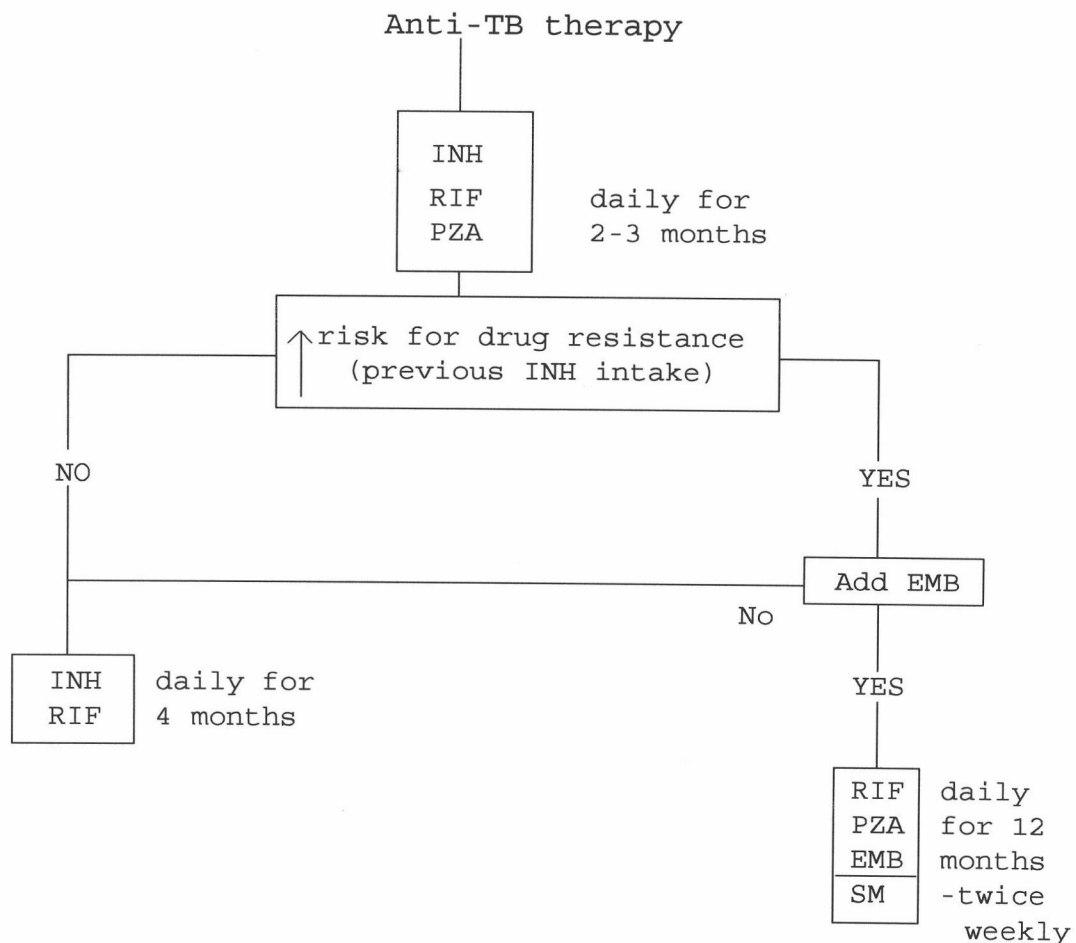
## **CHAPTER X**

### **CONCLUSION**

The target sample size of one hundred seventy one (171) was not achieved. Only one hundred (100) cases and fifty three (53) control patients qualified for the study. This is explained by the time element involved since the project included patients seen at the clinic from February, 1990 to May, 1992. Although short of the sample size, data analysis was carried out.

From the variables included in the study, previous therapy with anti-tuberculosis drug, particularly INH and rifampicin, positive history of tuberculosis in the past and alcohol intake for more than five years seemed to be associated with drug-resistant pulmonary tuberculosis. However, when all the variables were analyzed using stepwise logistic regression, only a previous history of INH intake gave statistically significant result. As previously stated, in the Philippine setting, INH is often mixed with cough preparations or vitamins. For most Filipinos, the drug is equated to "a vitamin that makes the pulmonary system" strong. When a patient coughs, he or she can easily secure INH tablets and takes them until the cough disappears. Misuse and abuse of anti-tuberculosis drugs contribute to the emergence of resistant strains of *M. tuberculosis*. This result duplicates

the study conducted by Barnes (1986). Although our study points to only one risk factor, we can not completely conclude that this is the only factor for the development of resistant pulmonary tuberculosis in as much as there are only a total of 153 patients (100 cases and 53 controls). However, based on the significance of previous INH intake as a predictor of resistance, we have devised a scheme of management for patients with the risk factor:



This scheme is suggested for patients strongly suspected to have tuberculosis but whose culture and sensitivity test is not yet available or would not be available, as in the case of patients living in the rural areas or those who could not afford the cost of the procedure. The combination of rifampin and pyrazinamide for long term use has not been fully explored. Thus, addition of ethambutol to the regimen enhances the effect of the drugs and minimizes the chance of developing drug-resistant pulmonary tuberculosis. Rifampin and ethambutol have been tried and extensively studied and found to be effective with no toxicity noted. Since INH, in effect, is not part of the therapy, rifampin, pyrazinamide, ethambutol make a good therapeutic cocktail. Since resistance to streptomycin is least in our present study, we suggest that streptomycin be included in the regimen. The drawback to this is the fact that daily injection may inconvenience the patient, and for elderly patients and those with concomitant renal problem, monitoring of kidney function becomes necessary to avoid the toxic effect that may arise from streptomycin administration.

Secondly, INH is still marketed by some enterprising businessmen as a vitamin for the lung, and in some cases, it is still mixed with some cough preparations. Therefore, we can suggest to our health policy makers to limit fixed drug combinations in the market and if there are still preparations with INH-cough syrup combination, to have this medication withdrawn from the market. It is suggested that implemen-

tation of the generics law be revived to monitor the sale of the various anti-TB drugs and at the same time avoiding the misuse and abuse of those drugs.

Thirdly, that the study be continued until the computed sample size is achieved for both cases and control groups, but analysis will involve a stricter  $\alpha$  value of 0.025.