Options on T.B. Chemotherapy

Studies show 50% failure rate in most TB programmes - primarily due to defaulting from treatment. In the common treatment regimes based on Streptomycin, isoniazid and thiacetazone, the required duration of 18 months treatment is the major reason for the high default rate. Controlled trials have shown 100% success with regimes based on rifampicin, isoniazid and pyrazinamide, but with ensured 100% compliance. There is scope to get a compromise between the low success of most programmes in the field, and the results of controlled trials. The compromise approach is based on the object NOT of getting 100% success, but of, say, 70% success, which would still be a great improvement over current programmes.

Table 1 shows the results from a number of trials. Instead of concentrating on those that give 100% success, let us look at those that give 70% success, ie., trials 8 and 9. These results have usually not been considered further, because a 30% failure rate is 'not acceptable'. Yet in most programmes in the field we are accepting a 50% failure rate.

Trials show that with a four month regime, only the first two months with rifampicin, 70% success can be achieved (assuming 90-100% drug compliance during the four month period).

If patients, and community health workers had to aim for good drug compliance for 4 months instead of 18 months, we may be setting more realistic targets. Obviously if a patient were still attending at 4 months, we should attempt to continue isoniazid/thiacetazone for another 2 to 4 months, but even if default occurred during this period, we would still be achieving 70% success.

Such ideas may not be acceptable to most physicians, but so long as programmes are based on regimes that aim for 100% success but which are not realistic in most rural or poor urban areas, we are likely to continue to lose the battle against TB.

TABLE 1 (All trials based on sputum positive patients).

Trial No.	Regime	Relapse rate 2 yrs after end of treatment
1	Standard 1 yr to 18 mths of 3 SHT/15HT	50% in most program
2	2 SHRZ/4HRZ 6 months	0
3	2 SHRZ/4HR 6 months	2%
4	2 SHRZ/2HRZ 4 months	10%
5	2 SHRZ/2HR 4 months	8%
6	2 SHRZ/2HRZ 4 months	16%
7	2 SHRZ/2HR 4 months	11%
8	2 SHRZ/2HZ 4 months	32%
9	2 SHRZ/2H 4 months	30%

Sources: 2-5 Tubercle 62 pp 95-101 (Hong Kong Data)
6-9 Am. J Resp. Dis. 123 p. 165 (E. Africa Data)

Key: S = Streptomycin; H = Isoniazid; R = Rifampicin
Z = Pyrazinamide

eg. 2 SHRZ/4HRZ = Two months streptomycin, isoniazid, rifampicin, pyrazinamide followed by four months isoniazid, rifampicin, pyrazinamide.

-- Paul Shears, Oxford : Dec 1984