INCUBATION TIME OF RELAPSES AFTER TREATMENT OF PAUCIBACILLARY LEPROSY

Sir,

I write this with reference to the article entitled 'Incubation time of relapses after treatment of paucibacillary leprosy' S R Pattyn (*Lepr Rev* (1984) **55**, 115–120. As the author has mentioned, information on the incubation time of relapse is important in order to plan the follow up period for 'cured' paucibacillary cases.

However, it is difficult to assess the usefulness of the median incubation time as calculated by the author. On one hand there is the influence of the annual increase in the number of discharges to be reckoned with. On the other there is a truncation effect which gives rise to an apparent increase in the number of cases which occur after a short incubation period. I shall attmept to demostrate this problem using the following model.

Table 1

Year of RFC	No. RFC's	No. relapsed				
		1981	1982	1983	1984	Total
1980	1000	10	10	10	10	40
1981	1000		10	10	10	30
1982	1000	—	—	10	10	20
1983	1000	—	—	—	10	10
Total						100

Table 2

Incubation time	No. replapsed
1 year	40
2 year	30
3 year	20
4 year	10
Total	100

Let us assume that the annual relapse rate among patients released from control is steady at 1% and that every year the same number of patients are released from control (RFC) (Table 1). If we just take into consideration the patients who have relapsed and ignore the population from which they are emerging the result will be as in Table 2.

Even though the annual relapse rate is steady this kind of analysis leads us to believe that 70% of the cases relapse within 2 years and that the median period for relapse is less than 2 years. At any given time there will be more RFC patients who have experienced their Nth year after RFC than those who have gone through their $N \div X$ years after RFC. Hence given a larger pool it is only natural that there will be a larger number of relapses occurring from those who have been released recently even if the relapse rate is the same throughout or increasing slightly. It can also be shown that relatively younger control programmes will show a shorter incubation time as compared to those units which have been going on for several years. Indeed if we were to take into consideration the variation in the number of patients released from a control programme annually the possible effect on the median incubation time calculated in the above manner would be considerable.

Perhaps it would be better to calculate the relapse rate using the person year concept. This would provide information on the probability of relapse for each year after release from control.

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