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CORRESPONDENCE

This department is for the publication of informal communications that are of interest because they are informative and stimulating, and for the discussion of controversial matters. The mandate of this JOURNAL is to disseminate information relating to leprosy in particular and also other mycobacterial diseases. Dissident comment or interpretation on published research is of course valid, but personality attacks on individuals would seem unnecessary. Political comments, valid or not, also are unwelcome. They might result in interference with the distribution of the JOURNAL and thus interfere with its prime purpose.

A Comparative Study Between 12 and 24-Dose Therapeutic Regimens for Multibacillary Leprosy Patients[1]

ABSTRACT

A comparative study was made of the initial and final bacterial indices (BIs) of 213 MB leprosy patients who had been administered 12-dose (Group 1/128 patients) and 24-dose (Group 2/85 patients) World Health Organization multi-drug therapy to measure the effectiveness of both treatment regimens. All patients were evaluated at the beginning of treatment, at 12 months, and again after 24 months had elapsed. Decline in BI values and average BIs at 24 months were found to be similar for both groups. Moreover, no statistical difference between the two treatment regimens was found in the frequency rate of reaction.

RÉSUMÉ

Une étude comparant les index bactérioscopiques (IB) initiaux et finaux de 213 patients lépreux multibacillaires qui avaient reçu, soit le traitement de 12 doses (1er groupe de 128 patients), soit le traitement de 24 doses (2ème groupe de 85 patients) de la polychimiothérapie recommandée par l'OMS, fut entreprise afin d'évaluer l'efficacité de chaque traitement. Tous les patients furent évalués au début du traitement, après 12 mois, puis enfin après 24 mois. Les 2 groupes présentèrent des diminutions de valeurs d'IB et des IB moyens à 24 mois tout à fait similaires. De plus, il n'y eut pas de différence significative dans la fréquence des réactions immunopathologiques entre les 2 groupes.

RESUMEN

Se hizo un estudio sobre los índices bacteriológicos (IB) inicial y final en 213 pacientes MB tratados con 12 dosis (grupo 1/128) o 24 dosis (grupo 2/85 pacientes) de la poliquimioterapia recomendada por la OMS con objeto de medir la eficacia de ambos esquemas de tratamiento. Todos los pacientes fueron evaluados al inicio del tratamiento, y después a los 12 y 24 meses de haberlo concluido. Los dos grupos mostraron una disminución en sus IB y un IB promedio similar a los 24 meses postratamiento. Tampoco se encontraron diferencias estadísticamente significativas entre las frecuencias de reacción observadas en los dos grupos de pacientes.

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Reprint requests to: Dr. Euzenir Nunes Sarno, Leprosy Laboratory, Oswaldo Cruz Foundation, Av. Brazil 4365, Manguinhos, Rio de Janeiro, RJ, Brazil, 21045-900. Email: euzenir@fiocruz.br

TO THE EDITOR:

In 1982, the World Health Organization (WHO) recommended administering a standard regimen of multi-drug therapy (WHO/MDT) composed of rifampicin, dapsone, and clofazimine to multibacillary (MB) leprosy patients for a minimum of 2 yrs (24 doses). At its seventh meeting, the WHO Expert Committee on Leprosy stated that while the 24-dose treatment for MB leprosy remained valid, the duration of MDT could be shortened to 12 months ([4]), which, having been well received by most of the of the major endemic countries, is now being implemented worldwide ([2]).

This study was carried out with patients in attendance at the Leprosy Outpatient Clinic of the Oswaldo Cruz Foundation (FIOCRUZ) in Rio de Janeiro, R.J., Brazil. A longitudinal study was designed to compare the 12-dose with the standard 24-dose MDT to ascertain bacterial index (BI) reduction, frequency of reaction, and patients' disability grade (DG) in two groups of selected MB leprosy patients. Group 1 was composed of 128 MB leprosy patients who initiated the 12-dose MDT regimen between 1998 and 2000. Group 2 consisted of 85 MB patients who received the 24-dose regimen between 1995 and 1997. All patients were previously classified according to the Ridley and Jopling scale in addition to appropriate clinical and histopathological parameters.

As inclusion criteria, an MB leprosy patient was defined as any untreated leprosy patient with typical MB lesions whose BI, confirmed in slit-skin smears taken from 6 sites, was higher than 0. Each patient's DG was evaluated by an experienced physical therapist and graded as 0, 1, or 2 according to WHO criteria. Both groups were evaluated with regard to their respective BIs and DGs at three specific times: at the beginning of treatment; after 12 doses (end of treatment for Group I); and at 24 months. Reactional episodes were constantly monitored during the 12, 24, and 36-month periods. By way of standard procedure, all reactional patients were administered prednisone.

Statistical analysis was performed with EPI-INFO 6, 2S (CDC) and STATISTICA software. The results of the contingency tables were studied via the chi-square (χ^2) test, considering a confidence level of 95%. Linear regression analysis was adopted to compare each participant's initial BI with his/her post-24-month BI. A multiple regression analysis model was used to control the effect of the initial attributes of each case with respect to therapeutic regimen and final BI; and a generalized linear regression model was used to determine risk of reaction.

Patient classification as to clinical form was as follows: *Group 1* (12 doses)—42 (32.8%) were classified as BB; 40 (31.3%) as BL; and 46 (35.9%) as LL. *Group 2* (24 doses)—30 (35.3%) were BB; 30 (35.3%) were BL; and 25 (29.4%), LL. At diagnosis, the mean age was 37.0 and 38.3, respectively. Group 1 was 75% male and Group 2, 60%. The mean BI at the beginning of treatment was 2.27 for Group 1 and 2.64 for Group 2 (Table 1). Initial BIs were grouped as follows: BI = 0 to 1: 27.2% (Group 1)/25.9% (Group 2); BI = 1 to 2: 18.0%/14.1%; BI = 2 to 3: 21.9%/14.1%; BI = 3 to 4: 22.7%/23.5%; BI = 4 to 5: 9.4%/18.8%; and BI = 5 to 6: 0.85/3.5%.

The average BIs of both groups were sim-

THE TABLE. *Characteristics of both groups at the beginning of treatment. (Actual number of patients indicated in parenthesis.)*

	Age mean ± SD (8–79)	Sex mean ± SD men	women	Clinical forms BB	BL	LL	Number of Skin lesions mean ± SD	BI Mean ± SD	DG 0	1	2
Group 1	37.0 ± 17.2	75% (96)	25% (32)	32.8% (42)	31.3% (40)	35.9% (46)	16.0 ± 7.5	2.27 ± 1.3	53.1 (68)	19.95 (25)	27.3% (35)
Group 2	38.3 ± 16.8	60% (51)	40% (34)	35.3% (30)	35.3% (30)	29.4% (25)	18.3 ± 5.5	2.64 ± 5.5	61.2% (52)	16.5% (14)	22.4% (19)
p value	0.59	0.02		0.60			0.02	0.08	0.50		

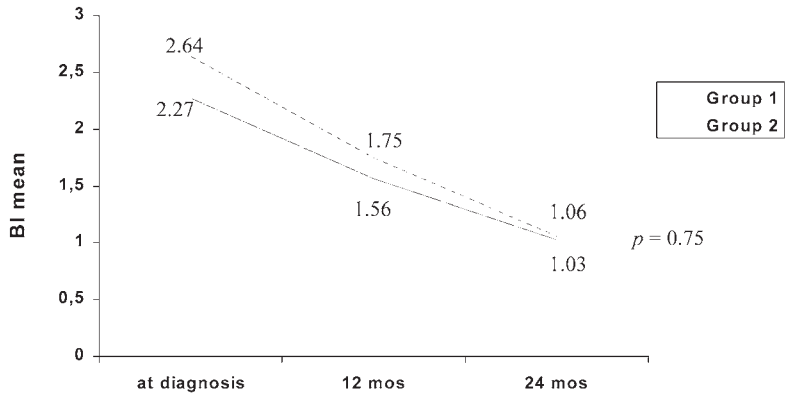

FIG. 1. This graph shows the average BI reductions measured at diagnosis, at 12, and at 24 months of both therapeutic regimens.

ilar at the beginning of treatment (2.27 and 2.64, respectively), close again after 12 months (1.56 and 1.75, respectively), corresponding to discharge for Group 1 and the middle of treatment for Group 2; and again very close (1.03 and 1.06) after 24 months, which is also the 12-month period during which Group 1, still under surveillance, received no specific medication and Group 2 had just completed treatment (see Fig. 1). At 3.3% and 3.8%, respectively, no significant statistical difference was found between the average BI monthly reduction rate as a result of either the 12- or 24-dose treatment regimen. Moreover, since the regression coefficients of the two groups were similar and statistically significant, it was seen that initial BIs as predictors of final BIs did not depend on the number of doses administered. In fact, no association between treatment regimen and the BIs reported at 24 months could be found. As expected, however, a significant relationship between the BIs ascertained at 24 months and the initial and post-12-month BIs was demonstrated.

While the percentage of reaction was high in both groups (>60%), no significant statistical difference in the frequency rate of reaction was found between them. Furthermore, no change in disability grade occurred during the study (60% remained DG = 0).

Precisely how long the MB form(s) would best be treated to achieve maximum results remains controversial in view of the fact that a significant number of patients continued to be bacillary positive at the end of specific treatment ([1, 3]) regardless of therapeutic scheme. From an operational standpoint, however, reducing the length of treatment without prejudicing its outcome has become a necessity in order to facilitate the implementation of MDT in distant rural areas where medical care is often scarce and/or inaccessible.

It is agreed that the time period covered by this study was insufficient to adequately evaluate the occurrence of relapses. To address this shortcoming, another study extending the follow-up periods for both Groups 1 and 2 for an additional 5 yrs is currently in progress.

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—Anna Maria Sales
Leprosy Unit, Oswaldo Cruz Foundation

—Paulo Chagastelles Sabroza
Brazilian School of Public Health

—José Augusto da Costa Nery
Leprosy Unit, Oswaldo Cruz Foundation

—Nádia Cristina Duppre
Leprosy Unit, Oswaldo Cruz Foundation

—Euzenir Nunes Sarno
Leprosy Unit, Oswaldo Cruz Foundation, R.J., Brazil

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