

Double Relapses after Treatment with Rifampicin-Containing Regimens among Multibacillary Leprosy Patients

**Samba. O. Sow, Abdoulaye Fomba,
Abdel K. Traore, Jacques Grosset &
Baohong Ji**

ALC Joha. South Africa 31/01 – 03/02 2005

Introduction

- Since 1935, CNAM (formerly the Institut Marchoux) in Mali is the reference center of applied research, training and evaluation for leprosy control programs in West Africa.
- From 1970 to 2000, a series of clinical trials were carried out with post-treatment follow-up, which allowed the detection of possible relapses.
- Between 1988 and 2004, 14 MB cases who had relapsed twice after completion of treatment with rifampicin (RMP)-containing multidrug regimens were observed.

Methods

Post-treatment follow-up:

- ◆ Annual clinical examination and skin smear

Definition of relapse:

- ◆ Either a confirmed increase of BI by at least 2+ over the previous value at any single site accompanied by reactivation of the pre-existing lesions;
- ◆ Or, the occurrence of definite new skin lesions with a BI greater than that in any pre-existing but non-reactivated lesions;
- ◆ Or, both.

Great majority of relapses were later confirmed by demonstration of viable *M. leprae*.

Methods (continued)

Determination of incubation period of relapse:

- ◆ Incubation period of relapse was defined as the interval between the end of treatment and the *theoretical date* of relapse, which was estimated as the mid-point between the dates of last visit without any sign of relapse and first visit with evidence of relapse.

Results

Table 1 : Regimens of treatment prior to first relapse

Regimens	Durations	No. cases	%
1500 RMP	Single dose	02	14.3
D 24	1 mos.	03	21.4
R3S6	1.5 mos.	02	14.3
RPC	3 mos.	01	7
RPD	3 mos.	01	7
PATTYN A	12 mos.	02	14.3
THELEP E2	21 mos.	01	7
GA	24 mos.	01	7
OMS-MB	24 mos.	01	7

Results (continued)

- Before treatment with RMP-containing regimen :
 - ◆ Mean age : 30 ± 9 years (10 – 48 years)
 - ◆ sex : 13 males (93 %)
 - ◆ Initial BI : 4.2 ± 1.0 (1.7 – 5.2)

Table 2 : Distribution of patients according to initial BI

BI	No. patients	%
≤ 4.0	05	35.7
> 4.0	09	64.3
Total	14	100.0

Results (continued)

- After treatment completion:
 - ◆ Annual clinical examination and skin smear
 - ◆ BI conversion to negative: 11/14 (78.6%)
 - ◆ Leprosy reactions : 9/14 (64.3%)

Results (continued)

- First relapse :
 - ◆ Incubation: 75.2 ± 31.4 mos. (6 ± 3 years)
 - ◆ Major characteristic of relapsed lesions:
 - ◆ nodules and/or leproma: 7/14 (50%)
 - ◆ diffuse infiltrations: 4/14 (28.6%)
 - ◆ macules: 3/14 (21.4%)
 - ◆ mean BI: 4.0 ± 1.2 (1.8 – 5.3)
 - ◆ Mouse foot-pad inoculation: 12/14 (85.7%) with viable *M. leprae*
 - ◆ All strains remained susceptible to RMP
 - ◆ 2/14 (14.3%) were resistant to DDS

Results (continued)

■ Treatment of first relapse :

- ◆ All 14 cases were treated with WHO/MDT for 24 months; the monthly component of the regimen was administered under supervision at our Institute.
- ◆ Follow-up after MDT treatment
 - ◆ 4 (28.6%) out of 14 patients whose BI converted to negative after a mean duration of follow-up for 48.1 ± 32.9 mos. (4 ± 3 years);

Results (continued)

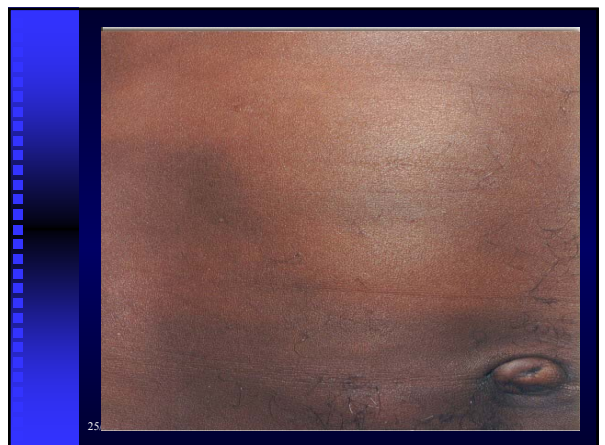
■ 2nd relapse :

- ◆ Occurred at 67.6 ± 25.7 months (6 ± 2 years) after completion of WHO/MDT
- ◆ Major characteristic of second relapsed lesions :
 - ◆ nodules and/or leproma : 10/14 (71.4%)
 - ◆ macules : 4/14 (28.6%)
- ◆ mean BI : 4.4 ± 1.0 (2.8 – 5.0)
- ◆ Mouse foot-pad inoculation : 10/14 (71.4%) revealed viable *M. leprae*:
 - ◆ All strains remained susceptible to RMP

Results (continued)

■ Treatment of the 2nd relapse :

- ◆ All 14 relapse cases were treated again with WHO/MDT for 24 months, administration of monthly drug was supervised at our Institute.
- All 14 cases are being followed-up:
 - ◆ So far no relapse.





Conclusions

- Double relapses were observed among 14 MB patients treated with RMP-containing regimens. Because these patients derived from different cohorts, it is difficult to identify the denominator, and therefore also difficult to defined the magnitude of double relapses.
- Higher risk factor for relapse:
 - ◆ High initial BI (≥ 4.0)
- Relapse occurred late, mostly 6 – 8 years after completion of treatment with RMP-containing regimens.

Recommendations

- Identify and follow-up regularly the higher risk subgroup MB patients for relapse.
- Need to have a minimum skin smear service in endemic areas
- Follow-up skin-smear positive MB patients for at least 5 years after completion of MDT
- Need to treat higher risk subgroup MB patients with duration of MDT longer than 12 months???

Merci!!!

- AFRF
- WHO
- CNAM/PNL/MOH MALI
- Patients
- My team