

CLINICAL OBSERVATIONS ON ERYTHEMA NODOSUM LEPROSUM (E.N.L.)

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These were made from the records of this phenomenon of recurring evanescent nodules of the skin in the case of 328 lepro-matous patients in Ankaful Leprosarium (admitted between 1952 and 1958) as follows:

	<i>Total No.</i>	<i>No. with E.N.L.</i>	<i>% with E.N.L.</i>
Men	220	120	54
Women	55	32	58
Children (up to 16 years) ...	53	22	41
	<hr/> 328 <hr/>	<hr/> 174 <hr/>	<hr/> 53 <hr/>

The nodules were sometimes the exacerbation of existing lesions, or sometimes the eruption of fresh lesions. The nodules themselves varied from about the size of a pea to about the size of a shilling, and they were usually tender on pressure.

Ankaful Leprosarium is the headquarters of the Ghana Leprosy Service and is situated 6 miles from the coast and is 100 miles west of Accra. It admits primarily the contagious types from throughout the length and breadth of Ghana, the larger proportion of patients originating from the Northern Region.

1. There occurred 906 reactions of E.N.L. in these 174 patients, the maximum number in one patient being 31 (during a four-year period); 51 patients had only one reaction, 29 had two, 24 had three, 10 had four, 5 had nine, 6 had six and 45 had more than six reactions.

2. Generally the E.N.L. was accompanied by pain. Often the eruption was localised, e.g. to the face or to one limb and often it was associated with ulnar or peroneal neuritis. Sometimes it was accompanied by bone or joint pains.

3. Fifty-one patients (29%) invariably developed a pyrexia (99°—101°F.) with each attack of E.N.L. and the rest (123 = 71%) were invariably apyrexial with each attack.

4. There was no concurrent disease apparent in 845 of the reactions but 31 were definitely suffering from ankylostomiasis, ascariasis, or taeniasis at the time of the reaction, 26 had very positive blood films for malarial parasites and 4 had other infections (furunculosis, tonsillitis, varicella, infected ulcer with acute lym-

phadenitis). Patients of good physique and nutrition appeared to be affected equally with the weak and undernourished.

5. A cyclical occurrence of E.N.L. was observed in most patients, e.g. monthly, three monthly, or six monthly, in both the male and female patients. It was unusual for the reaction to occur more than once a month and in any case, separate attacks were never recorded more than twice in a month. The frequency of attacks was apparently slightly diminished usually with the length of treatment. Patients who developed E.N.L. in the later stages of treatment appeared to have less frequent attacks than those who were affected by reactions in the early stages of treatment.

6. The phenomenon of E.N.L. occurred especially in patients with a high bacterial index initially, those with a low bacterial index being less prone to E.N.L. Apparently those with repeated reactions took a long time to become bacteriologically negative.

7. No relationship was observed between the reaction and the anti-leprosy drug used, that is, E.N.L. occurred with equal frequency in cases treated with DDS, sulphetrone or thiacetazone. A change of drug during treatment did not appear to alter the E.N.L. rate.

8. A definite elevation of the erythrocyte sedimentation rate occurred in 405 (45%) of the 906 reactions, and did not correspond with the cases showing a pyrexia.

9. No definite correlation was found between the stage in treatment and the frequency of E.N.L. Some patients showed E.N.L. in the middle stage of treatment only, especially when the bacterial index was still high; a few patients showed no E.N.L. at the commencement of treatment but did so only after two to three years had elapsed.

10. Out of the total number of 906 reactions, 471 (52%) occurred between March and August (inclusive)—the 'wet season', and 435 (48%) between September and February (inclusive)—the 'dry season'.

11. The treatment of E.N.L. with Stibophen is only palliative and does not prevent recurrences. A.C.T.H. (Cortrophin) in doses of 25 i.u., given intra-muscularly, for adults, was administered in severe cases or those which did not respond to Stibophen, etc., and with dramatic improvement after only two or three injections. Generally, treatment with A.C.T.H. was not found necessary to be continued for longer than 3—10 days, the dosage being gradually reduced.

REFERENCES

1. Editorial. *Leprosy Review*, **38**, 136. (Oct. 1957).
2. DAVISON, A. R. *Int. J. Lep.*, **24**, 399. (Oct.—Dec. 1956).
3. JOPLING, W. H. *Leprosy Review*, **29**, 116–118, (April 1958).
4. WHEATE, H. W. *Leprosy Review*, **29**, 60–61 (Jan. 1958).

APPENDIX I

OBSERVATIONS ON SMEARS

It has been stated by several authorities and can still be read in text-books that the skin of the buttocks is frequently bacteriologically positive and may remain so after all other lesions have become negative. The following observations, however, do not support this statement.

The following are the results of routine smears (monthly and diagnostic) for all patients resident in Ankaful Leprosarium, Ghana, during the past nine months, the average number of lepromatous/non-lepromatous being 370/80. The smears were taken from both ear lobes, both nostrils, one skin site and one buttock site.

Total smears = 3,143:

1. All negative	1,095	= 35%
2. All positive	886	= 28%
3. Ears (one or both) only positive	723	= 23%
4. Some positive, buttocks positive	206	= 6.5%
5. Some positive, buttocks negative	130	= 4%
6. Ears and buttocks only positive	72	= 2.5%
7. All positive but buttocks negative	28	= 0.9%
8. All negative but buttocks positive	3	= 0.1%
9. Total number of cases in which buttock smears positive	1,167	= 37%

Thus in only 0.1% of smears taken were the buttocks positive when all other sites were negative.

In only 37% were the buttocks smears positive, the great majority of which also showed other positive sites.

The ears gave the largest number of positive results (over 54%) and were the *only* positive sites in 23% of cases.

In 28% of the total smears, positives were obtained for all six sites.

APPENDIX II

STATISTICS

The following graphs are compiled from the Ghana Leprosy Service statistics for the year ending December 31st, 1957. The total number of patients under treatment was 29,606. Patients are classified as boys or girls up to and including 16 years of age.

It can be seen from the graphs that:

1. The ratio of lepromatous/non-lepromatous is approximately in the same region in any group, the ratio for the totals being 10/90. Actually, the ratio is somewhat lower (4/96) in the children than in the men (17/83) or women (7/93) indicating that the disease is relatively mild and probably not progressive.

2. Although a larger proportion of women are under treatment, a slightly higher percentage of the children are boys. Usually, the disease has a higher incidence in males, especially adults.

3. Of the lepromatous patients, the ratio of boys/girls is approximately that of the ratio of men/women.

4. Of the non-lepromatous patients there are more women than men in approximately the same ratio as there are more boys than girls.

5. Although there are more women under treatment than men a larger proportion of the lepromatous patients are men. However, although there are more boys under treatment than girls, a much higher percentage of the lepromatous children are boys. The females thus generally have the milder form of the disease.



