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Thalidomide in Leprosy Therapy

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The observations of intensive leprosy reactions in patients suffering from partly rather violent and severe pain necessitating the administration of Baralgin, Novalgin, Dolviran and often even of morphium, and the insufficient response of painful conditions in the leprosy reactions to corticoids, had caused us to follow up the observations made earlier by Sheskin (3) and Sagher (2, 3) and later by Languillon *et al.* (1) and to use thalidomide recommended by them in the therapy of leprosy. A first attempt with this method was made with Contergan—which at the time was still commercially available—in 1961/62 in one of our patients suffering from lepromatous leprosy. At the time we administered thalidomide together with Neoteben, and were able to observe that during the period of combined treatment with Neoteben, or later when it was given concurrently with DDS and Contergan, no major reactions did occur. In that case it was only after the discontinuation of Contergan application that major reactions recurred, which at the time could not be influenced with the desired effect by giving Decortin and Urbason.

In following periods three more patients have been treated with thalidomide. Thalidomide was, of course, never given as the sole therapeutic agent, but was administered only as an additional measure with a view to lessen and mitigate the leprosy reactions, and to cause a rapid improvement of the general condition of patients.

The effects of thalidomide, observed in all three cases, were rather impressive, for as early as a few hours after the first tablets had been given, the patients—who were treated for rather violent conditions of pain during leprosy reactions—all indicated by corroborating evidence that their painful condition had been mitigated. This feeling of relative well-being was maintained for several hours. The same effects were again obtained by a renewed application of these medicaments.

We have avoided administering thalidomide as a long-term treatment, but gave it to our patients, depending on the individual situation of the respective cases, for eight to 14 days, partly with an interruption, but in no case for more than 22 days. Especially impressive was the effect of this regimen in one patient who was undergoing a Lederkyn (sulfamethoxypyridazine) treatment (2 × 1 tablet of 0.5 gm. each per day), and where the reaction with concomitant fever, violent pain and nodular formations on the breast and arms and in the loins, showed a substantial improvement over the situation already evident two days after the onset of the thalidomide treatment; 7 days after the commencement of the thalidomide treatment all reactions had subsided. During that period it had not become necessary to discontinue the Lederkyn treatment or to reduce its dosage.

In another case, treated with Tanderil and prednisone prior to the application of thalidomide and where the leprosy reaction did not subside under the later therapy, on the second day of the thalidomide treatment the concomitant fever had already disappeared, while on the third day the patient was entirely free from pain and feelings of being unwell. Nor was the Lederkyn treatment discontinued in this case.

Thalidomide was used in these cases in a daily dosage of 400 mgm. or 6 mgm. per kilo of body weight as recommended by Sheskin and Sagher (3); after the subsidence of the acute events the dosage was reduced to the maintenance level of 100 mgm.

On the basis of our admittedly rather modest experience and limited number of cases it appears that the effects of thalidomide are more favorable than those of

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hydrocortisone derivatives. No disturbing or unfavorable side effects occurred in the small number of cases we had under observation, particularly as we did not apply the treatment for periods exceeding 20–22 days, and mostly used it for shorter periods of time. It is obvious that this medicament has to be applied very cautiously to female patients in the child-bearing age, because of its known teratogenic properties, the contraindication applying whenever there appears to be the least likelihood of any pregnancy. One of our female patients (32 years old), however, during an acute stage of reaction received thalidomide during clinical treatment, and in this patient, too, we observed a very prompt and good effect.

Because of the small number of cases in our work we can contribute nothing regarding the observations made by Sheskin and Sagher ([3]), viz., that the method has some significance for the prevention of neural, muscular or bone pathologic changes.

Thalidomide, as already emphasized by Sheskin and Sagher ([3]), is not an effective treatment for leprosy itself, as it is *no leprosy cure* ([4]). However, thalidomide treatment is suitable in mitigating considerably, or removing, the often highly painful leprosy reactions and concomitant conditions arising under the normal sulfone treatment, even when treating this disease with Lederkyn. Patients are gratified by the often surprisingly quick mitigation of pain and, what is more, it will not be necessary to discontinue the sulfone and Lederkyn therapy.

SUMMARY

After the positive results of therapeutic experiments with thalidomide in episodes of leprosy reaction obtained by Sheskin and Sagher, this drug was applied therapeutically also by us. After as short a time as a few hours following administration of the first tablets, the three patients who were treated with this drug during a leprosy reaction, indicated by corroborating statements that they felt better, and that pain had subsided. This subjective feeling of well-being continued for periods of several hours, and after renewed administration of these drugs the same effect was found again.

Thalidomide treatment, however, does not constitute a long-term treatment. It was given for periods of 14 to 20 days at a maximum. However, it can be applied again if episodes of reaction with concomitant pain recur. The drug, however, should not be given to female patients in the child-bearing age. On the basis of our admittedly limited experience, this therapy appears to be more favorable in all other cases than the administration of prednisone or other hydrocortisone derivatives. The daily dose chosen initially amounted to 400 mgm, or 6 mgm. per kilo of body weight, and was reduced to a maintenance dose of 100 mgm., as proposed also by Sheskin and Sagher.

Thalidomide certainly constitutes no leprosy cure. However, in combination with sulfones or Lederkyn it mitigates the often rather agonizing pain of patients during episodes of leprosy reaction.

REFERENCES

1. Languillon, J., Klein, J. M. and Gireaudeau, P. Traitement de la réaction lepreuse à type d'érythéme noueux par la thalidomide (N-Phthalimidoglutarimide). Paper submitted to the International Leprosy Congress held in London in 1968.
2. Sagher, F. Das Problem der Lepra-Reaktion. Schriften der Alfred-Morahionini-Stiftung, Issue 1, 1969.
3. Sheskin, J., and Sagher, F. Der gegenwärtige Stand der Thalidomid-Behandlung der Lepra und der Leprareaktion. Arch. klin. u. exper. Dermat. **237** (1970) 312.
4. World Health Organization. Therapy of Leprosy. Meeting of investigators on therapy of leprosy and methodology in drug trials. London, September 1968.