HYALASE (HYALUNONIDASE) INJECTION FOR LEPROMATOUS NERVE REACTIONS

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While visiting Oji River early in 1955, Dr. Gordon Currie suggested the use of hyalase to diminish the pain and disability of those with severe nerve reactions. He, himself, was on the move and has not had opportunity to test his idea. I have had that opportunity and with his permission I write about these cases.

At first I decided to choose my cases among those with severe reactions in two nerves, using the worst nerve to try the treatment and keeping the other for comparison. I also decided to use nerves which had had severe and frequently repeated reactions. Some nerve reactions are of short duration and repeated only once or twice so that success in these cases would not be significant. My first resolution was only kept partially, as the worse nerve almost invariably became the better nerve and with such intractable pain I could not leave the patient without effective treatment of the other nerve for weeks on end. Several of these patients had previously had procaine injections, nerve-stripping and plenty of Tabs. Codeine Co.

Hyalase was first given by dissolving one ampoule (3 mg.) in 20 ml. of sterile water. This was injected into the affected nerves. In some cases it was so painful that I decided to dissolve it in 2 per cent procaine instead. This, though still rather painful at first, as any intra-neural injection would be, was satisfactory. About 5 to 6 ml. were injected into each affected nerve, though account was taken of the size and length of nerve affected. Injections were given at weekly intervals and a course of five injections per nerve was used as the standard. Both these decisions were empirical.

All injections were attempted intraneurally, starting from the upper end of the nerve. Some of the worst cases, however, had such hard nerves that this was impossible. A perineural injection was then given.

When several nerves were injected at the same time, one ampoule of hyalase was dissolved per 20 to 30 ml. of solvent, e.g. when 75 ml. were needed, 3 ampoules were used.

Case Reports


November 1955, she has never, since nerve reactions started, had continued freedom from pain for three months until now. She is brighter and happier. The nerves feel small and not so hard. She says she can feel better with her hands.


E.A. Male. Age 18. Z/3425. April 1954, admitted with very severe crippling. He had slightly active minor tuberculoid leprosy. His hands have felt very cold, in addition to being paralysed and rather painful in the ulnar area. September 1955, L.U. and R.U. 5 injections of hyalase given. November 1955, says his hands are a bit stronger and he feels better and has no pain. The only obvious objective sign is that his hands are no longer cold as they have been for the past year or more.

There are 24 such cases and nearly all show the same uniform improvement:—

(a) lessening of pain,
(b) reduction in size of nerves,
(c) claims of increased strength and ability to feel heat and touch better.

I wish, however, to report all those in which there has been failure of any kind, though in most of these success has been at least partial.

N.N. Female. Age 26. Z/5121. As reported above, the L.M.C. did not improve until a nerve stripping had been done. All other nerves improved dramatically.

The Blind Infected with Leprosy in Japan


V.D. Male. Age 35. Z/1740. His nerve reactions subsided, but the hyalase gave him generalised pain and weakness for a day after each injection. He continued his course at his own request because of improvement in the nerve. November 1953, they have remained without pain for 5 months.


Conclusion

Though this is only a short trial, I am of the opinion that this treatment holds out better hope for those suffering from nerve reactions than any treatment so far used. Of course, it is not used in those cases in which caseation is suspected, as the probable result would be a spread of the area destroyed by caseation.

THE BLIND INFECTED WITH LEPROSY IN JAPAN

It is calculated that there are about 10,000 patients with leprosy in 15 leprosaria in Japan, and that of these about 1,000 are blind. However, both the number of those with leprosy and the proportion of those who are blind are diminishing. The lepromatous blind are doubly unfortunate, as in addition to being unable to read ordinary type, the anaesthesia of their fingers makes it impossible to read braille. However, a way out has been found by which they are able to read braille with their tongues or lips. Already (April, 1953) there are 108 braille typists, 45 tongue readers and 5 lip-readers. Also 73 are able to read braille with their fingers. This new movement has brought a fresh incentive to live to many of the patients. There is reported to be more blindness among those with leprosy in the north of Japan than in the south, and this is considered to be because the greater cold in the north encourages the more severe (lepromatous) form of leprosy, the form which causes blindness. Two reasons are given for the fact that blindness among those with leprosy is diminishing: (1) treatment with Promin, and (2) many of those already blind perished in the war.