PROMIN THERAPY.

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This is a report on the results of treatment of seven cases for one year.

It was not until August 1945 that we were able to obtain from the U.S.A. a small supply of promin for intravenous injection. We selected seven advanced lepromatous cases (L_3 type) all young adults, who were rapidly going downhill in spite of many years of the orthodox Chaulmoogra treatment. These patients belonged to the 20-30 year age group, 3 were men, and 4 women. All the patients were suffering from serious complications of the disease, deep chronic ulcers of the legs, superficial ulcerating nodules of the hands and face, ulcers of the nasal septum, oedema of the face and legs. Two patients were practically blind, one suffering from keratitis, and one from iridocyclitis. Two had conjunctivitis and three rhinitis. Physically these patients were weak, and were all mentally dejected.

Before treatment complete blood counts and urinalysis were done, and these were repeated every two weeks throughout the year. The patients were all eager to take the treatment.

The course consisted of 2 grammes intravenously daily for the first six days, and then one day's rest. The dose was gradually increased by 1 gramme weekly until a maximum of 5 grammes was reached. It was then continued at 5 grammes daily throughout the year. At the end of every six weeks of treatment one week's rest was given.

At the end of the first month, there was a marked improvement in the physique and mental outlook of the patients. Their appetites were markedly improved, and they began to take an interest in themselves and their surroundings again. The ulcers were all clean. At the end of three months the chronic ulcers were showing rapid signs of healing, the oedema of the face and legs had subsided, and the patients were gradually assuming their normal appearance. The eye conditions had not progressed and seemed to be arrested. Rhinitis had subsided, and nasal ulcers were healing. At the end of six months the chronic ulcers had healed completely, this was most remarkable as these ulcers had resisted all forms of treatment for many years. The patients were all free from ulcer dressings, and were very pleased about this. Nasal ulcers were also healed, and nodules were flattening out. No new nodules had appeared. In the eye cases although there was no marked improvement in vision, the condition had not become worse.

So great was the improvement at the end of six months that the other lepromatous cases demanded the drug. With difficulty we were able to obtain a larger supply and treatment was started on 70 patients.

In the second six months treatment of the orginal seven patients they continued to improve, and none of these patients had any relapses, or showed any symptoms of drug toxication.

A careful watch was kept on the blood count and urinalysis throughout the course. If the red blood count fell below 4 million a simple iron mixture was given. If it fell to 3½ million liver extract was given, and if it fell to 3 million treatment was discontinued and liver and iron given until a count of 3½ million was obtained before continuing treatment.

None of the patients developed any kidney complications. The patients were allowed to perform their normal duties throughout the course. It is proposed to continue the treatment for another year.

BACTERIOLOGICAL RESULTS.

Nasal and skin smears of the first seven cases were all M/1 at the commencement. (The enumerator M denoting more than 10 bacilli, and the denominator 1 denoting the number of fields.)

After a year all these patients were still positive.

Bacillary Counts.

Before Promin.	*Skin.*	*Nose.*	*After Promin.*	*Skin.*	*Nose.*
1st Case	M/1	M/1	1st Case	18/10	M/1
2nd „	„	„	2nd „	26/10	„
3rd „	„	„	3rd „	16/10	„
4th „	„	„	4th „	22/10	„
5th „	„	„	5th „	19/10	„
6th „	„	„	6th „	15/10	35/10
7th „	„	„	7th „	13/10	M/1

While the above bacillary counts show a marked diminution in skin smears, there has been practically no difference in nasal smears.

HISTOLOGICAL CHANGES.

Biopsies were taken before and after treatment :

Before promin :— Portion of skin examined showed typical lepromatous granulomatous tissue with many leprous cells packed with bacilli. There was very little fibrous connective tissue.

After promin :— Portion of skin examined showed very little lepromatous granulomatous tissue with much fibrous connective tissue. There were very few leprous cells with few bacilli, and relatively less infiltration with mononuclear cells.

DISCUSSION.

One theory has been put forward that while promin is not bacteriocidal to Mycobacterium leprae it probably acts on complicating pyogenic micro-organisms. As against this we have found that four of the seven patients developed several attacks of lepra reactions during the course.

The seventy patients who have had six months' treatment with the drug have all shown remarkable improvement, especially as regards the healing of chronic ulcers.

CONCLUSION.

We are of opinion that the beneficial results obtained by the use of promin are due to the fact that the drug acts on the lepromatous tissue which is destroyed, with the formation of fibrous connective tissue. In the process leprous cells are destroyed, and the reduction in bacilli is due to their being unable to multiply.

We consider promin a safe drug to give over long periods. It is definitely a most useful drug in the treatment of leprosy.

I wish to express my sincere thanks to Dr. B. G. Nehaul, Government Bacteriologist, for his report on the histological sections, and for his valuable assistance in trying out new staining techniques.