As this procedure has not been carried out in clinical patients, and as the dose required to heparinize a dog differs from that required to heparinize a patient, it is difficult to predict the dosage accurately. From our experience we would suggest that between 15 and 20 units per kg./hr. should be adequate. Since continuous intravenous administration is impracticable in patients outside hospitals, the intermittent intravenous injection of the heparin in doses of 1,500 units q.h. for the patient of average weight should suffice.

Consideration of this experimental evidence suggests that it might be possible to insert glass cannulae in torn

FIG. 2.—Approximately half actual size.

arteries soon after the accident. With suitable doses of heparin the cannulae might be kept patent until the patient could be removed to a hospital where repair of the vessels could be undertaken. This might be carried out with the simplest technique in advanced dressing stations behind the fighting line. In this way some of the disastrous effects of acute failure of circulation in extremities and neck might be prevented.

Summary

With a view to using glass cannulae to bridge defects in the arterial system of human beings as a temporary measure a series of experiments have been carried out on dogs. The results have been tabulated. With adequate heparinization, using a pump to provide continuous intravenous administration, glass cannulae of 1.5 to 2 mm. bore and 3.5 cm. length may be kept free from clot for varying periods of time up to seventy-six hours. The danger of oozing from the operative field in overdosage with heparin must be borne in mind.

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LEPROSY CASES IN THE BRITISH ISLES

BY

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At the request of the Medical Committee of the British Empire Leprosy Relief Association a subcommittee consisting of the three of us have carried out an inquiry into the number of leprosy cases seen during the last thirty years by dermatologists in all parts of the country. The following is an analysis of replies received to a circular letter which enclosed forms to cover the required information. These were received from fifty specialists, only fourteen of whom had seen any cases of the disease. The great majority were reported by Dr. J. M. H. MacLeod (to whom we are particularly indebted for his reports of cases) from the St. Giles Homes in Essex and private cases, and by two of us (Sir Leonard Rogers and Dr. E. Muir). All but six cases had been seen in London, doubtless due to so many patients from over-seas visiting London for medical advice. The provinces therefore show very few cases, although no doubt there are some regarding which no information has been received. Concealment is likely to be less common than it was two decades ago now that it is generally known that treatment of value is available to those seeking it in good time.

Countries of Origin.—It will be seen from the data in Table I that no fewer than thirty-five of the seventy-

TABLE I.—Countries in which the Disease was Apparently Acquired (87 Cases)

Europe: British Isles	4	Malta	1	Norway	1	Russia	1	7
Asia: India and Burma	35	Malaya	9	East Indies	2	China	3	49
Africa: S. Africa	5	S. Rhodesia	1	Zanzibar	1	Nigeria	2	10
Western Hemisphere: West Indies	5	British Guiana	4	Colombia	1	Brazil	2	12
Doubtful: "Abroad"	6	unrecorded	3					9

eight cases regarding which information is available came from India, including Burma—doubtless owing to the large number of Europeans and to the high incidence of leprosy in that densely populated country. Malaya was next, with nine cases.

Cases Apparently Contracted in the British Isles.—These number only four in thirty years, all of which were seen from eleven to twenty years ago, and were reported by Dr. J. M. H. MacLeod. In each of these there was prolonged close contact with a highly infective lepromatous case; one was a conjugal infection, and the other three patients were first seen when respectively 12, 15, and 18 years old, indicating infection at the early susceptible age. On account of lower susceptibility in adults conjugal leprosy infections are far less common, and we know of several highly infectious patients who have been faithfully nursed by devoted wives for a number of years in this country without transmitting the disease. No case is known to us of infection in the British Isles from a neural or a tuberculoid case, in which leprosy bacilli are very few and are difficult to find.

Classification of the Cases

In Table II the eighty-seven cases (after excluding duplicates returned by more than one specialist) are classified into different types and arranged to bring out the number still alive and resident in this country. These are subdivided into the little-infective neural and tuberculoid and

TABLE II.—*Cases of Leprosy seen in Recent Decades by British Dermatologists*

	Lepromatous and Mixed	Tuberculoïd	Neural	Type Doubtful	Totals
Former cases :					
1. Dead	16	—	7	—	23
2. Repatriated ..	6	—	7	—	13
3. Last seen over 10 years ago	3	—	7	1	11
Little-infective living neural and tuberculoïd :					
4. Last seen under 10 years ago	—	—	4	—	4
5. At present under observation ..	—	1	11	2	14
Infective living lepromatous cases :					
6. At present under observation ..	18	—	—	—	18
7. Last seen under 10 years ago	4	—	—	—	4
Totals	47	1	36	3	87

the more dangerous lepromatous or cutaneous cases. Those styled "mixed" are included under the more infective lepromatous type, as bacilli may be numerous.

In Table II, lines 1 to 3 show respectively those already dead, those repatriated, and those presumed to be dead or to have passed into a little-infective stage. Those in Category 3 were last heard of from ten to upwards of thirty years ago. The presumption of death after that period is considered justifiable in patients of the lepromatous type, for no fewer than eleven out of thirteen such patients regarding whom information is available had died within one to eight years of being first seen. The whole of the cases in lines 1 to 3 may thus be regarded as no longer of any danger to the community.

Lines 4 and 5 show little-infective neural cases, including one with tuberculoïd lesions. They are still alive, or presumed to be alive, because they were last seen less than ten years ago. In view of the fact above recorded, that no such case has been known to cause infection in this country, they present very little danger to the British community, although in rare instances abroad neural cases have been known to pass into a more infective type.

Lines 6 and 7 each show infective lepromatous cases, those in the former line being known to be alive and in this country, and those in the latter being presumed to be alive as they have been seen within the last ten years. They number eighteen and four respectively, giving a total of twenty-two; they require further consideration.

Living Conditions of Infective Lepromatous Cases

These are shown in Table III, which brings out the following points: Of the twenty-two, five were safely accommodated at the St. Giles Homes; of two more it is reported that one is "strictly segregated" and the other is also isolated at home, "keeping absolutely to himself

TABLE III.—*Conditions of Living of the Infective Lepromatous Cases*

Isolated at the St. Giles Homes in Essex	5
Isolated with careful precautions at home	2
Reached a quiescent little-infective stage	2
Seen at the Tropical Diseases Hospital	4
Under expert care and treatment	5
Conditions unsatisfactory	4

and taking every precaution against dissemination" of his disease; in two more the disease has reached a quiescent and little-infectious stage under treatment; four others were seen at the Hospital for Tropical Diseases, London, and will doubtless have received full instructions regarding the necessary precautions; and a further five are under the highly expert care and treatment of London specialists. In the remaining four the living conditions were not regarded as very satisfactory. The first was reported in

1929 to be residing in a flat with his wife and a young maid during an attack of leprotic fever. The second, a Eurasian subject, was living in the provinces unsegregated. The third was living five years ago with his wife and adult daughter, aged respectively 55 and 35. With these four exceptions the infective cases appear to be well cared for and of little danger to the British community.

Conclusions

We conclude from the above data that the present position is reassuring in view of the fact that nearly all the cases of the infective type are under expert care. Moreover, the danger of infection under the good hygienic conditions of Great Britain is much diminished by the fact that the great majority of the repatriated patients are of a social position that permits them to live under favourable sanitary arrangements and to avoid overcrowding. Further, many of them have reached an age when they are unlikely to come into close and prolonged contact with children, who are considered particularly susceptible. We are, however, of the opinion that all infective lepromatous patients who are not in a position to carry out effective home isolation with absolute prohibition of close contact with children should, so far as is possible, be accommodated at the St. Giles Homes. If necessary, Government funds should be made available for effecting this purpose.

CHEMOTHERAPY OF GONOCOCCAL INFECTIONS IN WOMEN AND CHILDREN

BY

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In the past two years the results of chemotherapy of gonococcal infections in the male have been fully reported, but comparatively little has been published on the chemotherapy of gonorrhoea in the female. In this paper are discussed the methods adopted and the results obtained in three series of cases: (1) gonorrhoea in adult women—104 cases, mostly out-patients; (2) gonococcal vulvovaginitis in children—twenty cases, all in-patients; (3) gonococcal ophthalmia in infants—twenty cases, all in-patients.

1. Gonorrhoea in Adult Women

Of the 104 cases treated, forty were early acute cases, twenty-seven subacute, and thirty-seven chronic. The majority of patients were from 20 to 35 years of age. Three had abscess of Bartholin's glands, two had acute salpingitis, and two had both syphilis and gonorrhoea.

During a preliminary trial period efforts were made to determine the best time to start chemotherapy, the most effective daily dosage, and the optimum length of treatment. In one group of acute cases the drug was withheld for the first week to allow development of some degree of natural immunity. In another group the drug was administered at once in a dosage of 2 grammes daily for ten to twelve days; while in a third group a smaller daily dosage was given for seven to ten days. The method which seemed to us to give the best results was the administration of one tablet (0.5 gramme) of sulphapyridine (M & B 693) four times daily after food for one