lung it would be very easy to ligature and cut off many portions of lung, if the disease were found scattered in patches.

DISEASES PROBABLY CAUSED BY FLIES.

BY SURGEON-GENERAL SIR WILLIAM MOORE,

K.C.I.E.,

Honorary Physician to the Queen.

DURING my Indian service I had to frequently comment on the necessity of protection from flies, which at some seasons of the year, especially in the interior of the country, and more particularly in the sandy districts of Western India, occur in vast numbers. So far back as 1858¹ I urged the necessity of protecting the food from flies, both before and after cooking, in barrack cookhouses. On sundry other occasions I had to draw attention to the proximity of public shambles and of public latrines, between which flies were constantly passing; also to the proximity of latrines and cookhouses; also to the manner in which food was prepared in the bazaars, where I have seen flies chopped up with the meat being made into sausages or "kofters."² On another occasion I mentioned the excessive prevalence of mange among animals in certain Indian cities, scarcely any animal being free from the disease, which I believe was as often conveyed by flies as by direct contact.³

When mentioning the necessity of protecting food from flies, I urged the probability of flies coming fresh from the evacuations of a cholera-stricken person, and so conveying the cholera poison to the articles of food they might next investigate. My impression, long held, that flies convey cholera poison receives corroboration from the researches of Sawtschenko. This observer states that the specific bacilli could be demonstrated as late as the fourth day after feeding flies with pure culture. Flies were fed on sterilised broth after bacilli had been supplied to them; preparations from these flies showed immense quantities of bacilli which had multiplied on the bodies of the flies. Cholera bacilli taken from the bowels of these flies killed guinea-pigs as quickly as the original culture. In connection with the matter it may be mentioned that cholera chiefly prevails when flies are most numerous.

If cholera may be thus spread, it is certainly probable that other diseases may be disseminated in a similar manner—Enteric fever, phthisis, anthrax, leprosy, for example; especially in a country where, outside hospitals, no care is taken as to the disposal or disinfection of excreta, or as to the disinfection and washing of soiled clothing. Flies seize every opportunity of investigating all kinds of filth. They take every opportunity of examining sores and eyes, whether healthy or diseased. Flies in the East have not far to pass from diseased evacuations, or from articles stained with such excreta, to food, cooked and uncooked. They have a less distance to go from a diseased eye to a healthy one. And they have not far to proceed from a leprous sore, of which so many are exposed in the streets by mendicants, to some accidental sore or abrasion of the skin of a healthy person; probably of the skin of the feet, which so frequently occurs to natives. That syphilis is not frequently communicated by flies is explainable from the parts affected being less exposed.

That flies in the East cause "peenash" or maggots in the nose, both of animals and of human beings, is not doubted; also maggots in neglected wounds. It therefore appears that much greater care should be given to protection from flies. The occurrence of isolated cases of cholera and of enteric fever, also of ophthalmia, may be explained by the conveyance of the germs of these diseases by flies.

¹ The writer's *Health in the Tropics*.

² Selection from the Records of the Government of India, Foreign Department, No. 108.

³ Marwar, the Land of Death, *Indian Annals of Medical Science*, 1876.

ROYAL HOSPITAL, BELFAST.—Dr. Morrow, on his retirement after two years' service as resident medical officer, has been the recipient of an address and presentation from the nurses and resident staff of the hospital. He is about to enter upon practice in Belfast. Dr. Colville has succeeded Dr. Morrow.

THE EFFECTS OF KOCH'S TUBERCULIN COMBINED WITH SURGICAL MEASURES IN THE TREATMENT OF LUPUS.

By MALCOLM MORRIS, F.R.C.S. Ed.,

Surgeon to the Skin Department, St. Mary's Hospital.

THE exaggerated hopes to which the premature announcement of the discovery of a remedy for tuberculosis by Professor Koch gave rise were followed by so great a reaction that there is now a danger of the real therapeutic virtue of the remedy being lost sight of in the disappointment caused by its failure as a specific. It cannot be denied that the disappointment seemed at first to be fully justified by the fact that after Koch's method had been applied in strict accordance with his own directions, the last state of the patient was in too many cases worse than the first. It appears to me, however, that in absolutely condemning tuberculin as useless, or worse than useless, we do not take sufficiently into account the generally unsatisfactory nature of the results of other methods of treatment in cases of tuberculous disease, and notably in cases of lupus.

After having practically dismissed tuberculin from my mind as a possible remedy for lupus in view of its apparent failure to produce any permanent effect, I have since seen reason to modify my opinion to some extent. In following the after-course of cases in which it had been tried, I have been struck by the fact that they were decidedly more amenable to surgical treatment than they had ever been before. Although the tuberculin itself was powerless to cure the disease, the intense inflammatory reaction stirred up by the injections seemed to have modified the morbid process in such a way that although recurrence took place in all the cases under my observation, when the fresh growth had been effectually dealt with by local treatment, the tendency to recurrence seems to be kept in check for a considerable time, if not definitively abolished. In illustration of this result of Koch's method I subjoin the following brief notes of two cases under my own care.

CASE I.—This was one of the earliest cases treated by Professor Bergmann at the time of the great rush to Berlin in November, 1890. The case was fully reported by Dr. Pringle and myself in the *BRITISH MEDICAL JOURNAL* of January 10th, 1891, p. 72. The patient was a man at that time aged 22, suffering from typical lupus of the nose, palate, and gums; the disease had been repeatedly scraped and cauterised, and masses of caseous glands had been removed on several occasions. The improvement immediately following Koch's treatment was very remarkable, but within a few weeks of the patient's return to England the disease showed signs of renewed activity. In February, 1891, the patient went to sea. When he returned in the following May the disease had made such progress that a most extensive removal of lupus tissue

with extirpation of several glands was necessary. In February, 1893, some small isolated nodules of lupus were removed; there was no enlargement of glands. In April, 1893, the