

requested to go to the assistance of these poor people, arrived at the village, he found it in a state of filth almost unexampled, the people in consternation, the sick without nurses, and the single medical attendant nearly exhausted with fatigue. Mr. Bowie immediately arranged a plan for the daily visitation of every house; obtained additional nurses and medical aid, carried out extensive cleansings, caused the removal of nuisances, and suggested improved means of ventilating the sick chambers. From the time that these measures were brought into operation only four new cases of cholera occurred; but here also the premonitory diarrhœa went on; every case, however, being promptly attended to was prevented from passing into the developed stage, and hence the rapid disappearance of cholera.

#### HOUSE TO HOUSE VISITATION FOR GLASGOW.

The success which thus attends these measures when applied to small populations within the control of a moderate visiting staff, led to their adoption at Glasgow. But here the difficulty was much greater. For the purpose of ordinary medical relief, Glasgow city parish being subdivided into 17 districts, and the barony parish into six districts, it was deemed expedient to base the preventive measures on the existing system of medical relief rather than to lose time in organising another machinery. The entire population of the 17 districts of the city parish is, in round numbers, 152,000, and of the six districts of the barony parish about 127,000. The task was, to arrange an easy and effectual system of daily house to house visitation over the whole of the affected localities containing this large and, in the most susceptible districts shifting and migratory population. The details of the plan will be found in Dr. Sutherland's report. It was briefly this:—

"The existing districts being preserved, each district surgeon, in addition to his ordinary duties, was required to undertake the office of superintendent within his district. There were thus in the two parishes 23 district superintendents, and under each of these officers were placed a few advanced medical students, or qualified practitioners, to visit from house to house. These visitors were provided with medicines to administer on the spot to all persons suffering from premonitory symptoms, a practice which had been found most beneficial in Dumfries and Nordelf. Advantage, as has just been stated, was taken of the circumstance that Glasgow is a university city, to select qualified young men from the more advanced medical students as visitors. The entire working out of the system was placed in the hands of a general superintendent for each parish. General instructions, giving all needful details of the plan, were printed and circulated among the superintendents and visitors. For the city parish there were 40 visitors, and for the barony parish 28, in all 68 visitors. Dispensaries were opened night and day for all necessitous applicants, and a cholera hospital and houses of refuge were provided. A system of sanitary inspection was likewise introduced into the large manufactories, by the aid of the Secretary of State for the Home Department, through Mr. Stuart, the inspector of factories in Scotland, with the view of detecting and treating immediately all premonitory cases that might occur among the workpeople; and in one district in the barony parish a body of lay visitors at 2s. 6d. per diem was employed with success."

Dr. Sutherland concludes his account of the arrangements which were made for meeting this outbreak in the following words:—

"I cannot conclude this part of the report without expressing my high sense of the great ability and energy with which the visitation system was carried out by the medical officers of the parochial boards; and I think it only an act of justice at the same time to express my conviction, that

whether we consider the extent of the machinery employed during the late fearful epidemic, or the zeal with which it was sustained by the most active members of both boards; or the expense cheerfully incurred by them during a period of great pecuniary difficulty in parochial affairs, no provision more munificent was ever made for the relief of a great public calamity, than that carried out by the humane and enlightened citizens of Glasgow."

At the time when these arrangements were completed, the epidemic had attained its height. On carrying them into operation, the first result obtained was the discovery of a number of corpses of persons who had died of cholera without having received any medical aid whatsoever; the number discovered amounted to 50; but there is reason to fear that such deaths were still more frequent at an earlier period of the epidemic.

The second result was, the discovery of a great number of cases of fully developed cholera, which were going on wholly without medical assistance. Some of the visitors found as many as 12 of these each day for some days after the visitation commenced, and the visitors concur in stating their belief that in these instances, neither the individuals nor their friends would have applied for medical relief.

The third result was the discovery of great numbers of premonitory cases in various stages of progress, not only without the application of any means to arrest them, but without the slightest consciousness on the part of the affected persons of the danger they were in. The first return showed the existence of 273 cases of diarrhœa to 60 of cholera; and of these diarrhœal cases, 35 had the peculiar rice-water appearance which marks the close approach to the fully developed stage; but as the working of the visitation became more complete, the proportion of the premonitory to the developed cases daily increased. The tables of general returns, reports Dr. Sutherland—

"Show, that throughout the entire districts under visitation, the proportion of the premonitory to the developed cases amounted to nearly 600 per cent.; in the city districts it was 504 per cent., and in the barony districts 685 per cent.; but when the districts are taken individually, the proportions are still more striking. They vary from under 200 per cent., to about 2000 per cent., and in one instance (barony district, No. 1), the premonitory cases amounted to the enormous cypher of 2379 per cent. of the cholera cases. During particular days in the course of the epidemic a much larger proportion of diarrhœa and other premonitory cases were discovered than during others. This partly arose from the greater comparative success of the visitation, and also partly from the course which the disease happened to take at the particular period. The percentage of premonitory cases on these occasions rose as high as 2000, 2800, 3700, and on one day in the barony parish it was 3850 per cent. of the cholera cases.

"The total number of premonitory cases treated during the continuance of the house to house visitation, from Dec. 31, 1848, to Feb. 26, 1849, inclusive, was no less than 13,089, and if to this be added the number of unreported cases already alluded to, it is not improbable that about 15,000 such cases were brought under treatment by the parochial medical officers and visitors. During the height of the epidemic, indeed, all Glasgow appears to have been affected. The number of cases treated by private practitioners also was very large. One gentleman prescribed for about 1100 such cases in the denser parts of the city, and many cases of diarrhœa occurring in the better parts of the town, were found to be extremely obstinate in their character. It is to be feared that among the richer classes not a few lives were lost by delay in applying for medical aid."

Dr. Sutherland adds—

"Tables compiled from the returns of Dr. Miller, and the