

(5) During hot weather, and especially when conjoined with great atmospheric dryness, these organisms are given off from all liquids containing them, and are carried into the air in very large numbers by the ascensional force of evaporation. This fact can be easily demonstrated by covering any vessel containing a solution abounding in bacteria with a glass plate. The under surface of the plate becomes coated with watery vapor, which can be collected into drops by the addition of ether, and on subsequent examination discloses the presence of bacteria. These bacteria, as has been before stated, are the active agents in causing putrefaction in putrescible liquids and substances of animal organic origin, and their appearance in the air of sewers and close cesspools is a sure indication that rapid putrefactive changes are going on in the excrementitious matters that may be retained in the former or collected in the latter.

(6) In badly-sewered districts, milk will be found to be speedily infected with the above ferments; their presence may also be frequently recognised in the stale food of infants, if due care be employed in their collection.

(7) The juices that exude from and adhere to the over-ripe fruit, exposed in shops or hawked about in such districts, will be found, with few exceptions, to contain numbers of bacteria, (rods and spherules) moving about amongst the cells of *saccharomyces exiguns* (Rees), the ordinary variety of fruit ferment.

(8) The atmosphere of these districts during hot summer weather, when filtered, is always found to yield fungal elements, ranging in character from micrococcus to mycelial filaments. I have never detected the presence of bacteria in the air of the same localities during any day in April or May.

(9) For the last two years the commencement of 'summer' diarrhœa in Leicester has been contemporaneous with the appearance, in large numbers, of bacteria in the air of some of its sewers.

The weather conditions of 1878 have been more favorable than last year for the development, multiplication, escape, and subsequent atmospheric diffusion of these sewer organisms, and these conditions have given rise to a greater prevalence of the disease and a higher fatality.

In a previous part of my paper it was shown that the above organisms are present in great numbers in the bowel discharges and vomited matters of patients affected with the complaint under consideration. I therefore consider that (a) diarrhœa, as it affects both adults and infants during the summer months, owes its origin, in the great majority of instances, to the introduction of minute living organisms (bacteria) into the system by means of air or food; and (b) the disease depends upon putrefactive changes in the bowel contents, which changes are correlative to the development and multiplication of these microscopical organisms.

The strongest evidence in favor of the putrefactive nature of the disease is afforded by the treatment. I have obtained the best results by giving *antiseptics*, either alone or combined with mild astringents.