

it is found feeding upon the carrion. Prof. Lister entirely ignores the chemical and physico-chemical laws of nature. But, while the body and the individual tissues have life, they are under the government of vital laws; and when life departs they come under the power of natural physical laws. Decomposition of dead organic matter is as natural as decomposition of rock under the influence of the sun, air and water, or iron exposed to moist air, or ice to the sun. When our bodies die, decomposition soon begins to take place, unless prevented by certain chemical agents or conditions of atmosphere. The skin of animals are converted into leather and prevented from decomposing by certain chemical agents and processes. When we have a contused wound and some of the tissue is crushed to death it must decompose and it must be sequestered by a process akin to the inflammatory. In an incised wound, or after an operation, if the liquor sanguinis which is poured out, is not removed the organic portion will also decompose. The pus cells when elaborated will, after a time cease to have life and will also decompose. Now decomposition may be noxious or innoxious. This depends upon certain chemical conditions, as well as the previous healthiness of the organic material. We all know that fresh meat will keep a long time in winter, and soon spoil in summer. We know also that a moist and heated atmosphere will hasten decomposition. The more rapid decomposition is, the more it partakes of the putrefactive character. Bearing these well known facts in mind we have no difficulty in understanding why putrefactive decomposition so readily takes place in wounds when they are covered up by numerous bandages and lint as was formerly the case. The heat and moisture from the body favours it, the pent up air, soon deprived of all oxygen promotes it. But a wound purified by washing, and the tissues vitalized by the access of pure air, is not likely to be the seat of putrefaction.

But there is another difficulty in the way of accepting Listerism as a scientific doctrine. No surgeon of any experience has failed to have cases, in which putrefaction took place beneath the skin, where the atmosphere did not reach. Putrefaction then can and does take place without the presence of air. If it can occur at all without the air furnishing germs to cause it, by what process of reasoning can it be concluded that their presence is

necessary at all. But it is said, I believe, by some Listerites that the bacteria reach the part where putrefaction occurs, by the way of the blood, although I heard Prof. Lister deny such a possibility. If, however, the bacteria can reach a part which has been bruised, by an internal route, why should the surgeon attempt to create a barrier to their entrance by the external wound? The absurdity of this naturally made Prof. Lister unwilling to admit that bacteria did or could operate by way of the blood. However, we are confronted with the declaration of experimenters quite as capable as Prof. Lister, that bacteria are found in different parts of the body and in the blood.

On the contrary, we are confronted by the fact, that the practice according to Lister is often very successful. We are all familiar with the fallacy contained in the words, *post hoc ergo propter hoc*. We also are aware of the fact that the practice of medicine according to Hahneman is often successful. Indeed when homœopathy first attracted the attention of the public, its success was often very remarkable, and it led the profession to consider their mode of practice. The result was they found that they were using drugs too largely, that nature, if let alone, was in a large number of cases able to effect a cure. Not only that, the profession learned that the medicines they used often interfered with the salutary efforts of nature. So that while they saw the absurdity of the doctrine of homœopathy, they learned a valuable lesson. In like manner surgeons may learn a lesson from Listerism. Not that scientific surgery had no other way of acquiring a knowledge of the essential elements in the treatment of wounds. The careful student of Sir James Paget, and of Prof. Billoth, will have no difficulty in learning the true principles based upon the workings of nature, in connection with external injuries and the inflammatory process. And any one who has properly examined the teachings of the late John Hilton in his lectures on "Physical and Physiological Rest," cannot fail to perceive the fundamental principles of scientific and successful surgical practice, without importing visionary views of external influences through air germs. Unfortunately the modesty of these master teachers did not allow them to disseminate their views by missionary journeys to different parts of the world. They did not make a point of indoctrinating young students and sending them forth with the enthus-