sues the blade of a bistoury, passed in like manner through a blaze ; let fall into the cut thus made a few drops of common water, or introduce a small rag of cotton which has been exposed to the current of the air of the street ; afterwards cover the quarter of mutton with a bell-glass. Make the same experiment on a similar mass of flesh passed over fire, and some drops of water perfectly deprived of living germs, which is done by raising the water to 120° C. (248° F.) If we consider that muscular flesh readily absorbs oxygen, and evolves an almost equal volume of carbonic acid, we shall readily comprehend that these drops of water are found as if inseminated by aid of the atmospheric air in presence of a culture favourable for the development of certain germs ; besides it is easy to fill the bell glasses which cover the flesh with pure carbonic acid. Observe now, what occurs in a day, or two at most, in a temperature of 30° to 40° C. (86° to 104° F). The quarter of mutton with the pure water shows no microscopic organisms in any part ; whilst, on the contrary, that with the common water, although it may not have received more than a drop of the water of the Seine, or some other dirty water, containing in every part of its mass, and even over its entire surface, anërobious vibriones, more or less rapid in their movements and their propagation.

The experiment is still more notable when there has been deposited in a central point of a piece of flesh a drop of the culture of a vibrio in a state of purity, i e., without intermixture of other species. The septic vibrio, among others, penetrates, and multiplies with such facility, that every microscopic bit of the muscle presents them in myriads, and their corpusculous germs also. The flesh, in these conditions, is totally gangrened, green on its surface, tumefied with gas, easily sundered, and forming a sanious fetid pulp. What a convincing demonstration, though indirect, of vital resistance, or to use an expression more vague, and at the same time more clear, of the influence of life in combating the consequences, so often disastrous of wounds in surgery. By the water or the sponge with which we wash, or the lint with which we cover a wound, we may deposit in it germs which as you have well seen, are gifted with extreme facility of propagation in the tissues, and we might infallibly bring death to our patients, in a short time, did not the life in their members oppose the multiplications of the germs. But alas ! how often is this vital assistance impotent ? how often do the constitution of the wounded, his moral state, the evil conditions of the curative process, oppose but an insufficient barrier to the invasion of the infinitely little beings, with which unwittingly you cover the injured part ! If I had the honour of being a surgeon, conscious as I am of the dangers to which the germs of microbios sown broadcast on all objects, but particularly in our hospitals, expose the patients, not only would I use no instruments not perfectly clean, but even after having cleansed my hands with the greatest care, and having rapidly submitted them to a brisk heat, which would expose one to no more inconvenience than is experienced in passing from hand to hand a piece of burning charcoal, I would employ only lints, ligatures, or sponges, previously exposed to an atmosphere of 120° C. (252° F.). In this manner we should have no fear unless as to the germs in suspension about the bed of the patient ; but observation has shown us daily that the number of these is, so to speak, insignificant, compared to those scattered in the dust covering the surface of objects, or in the cleanest common water. And, besides, nothing is opposed to the undertaking of the antiseptic process of treatment ; but with the precautions which I indicate it may be very much simplified. Phenic acid, not concentrated, and consequently without inconvenience from causticity to the hands of the operator, or to his respiration, may be advantageously substituted for the concentrated.

The importance of the subject is sufficient to warrant a few remarks respecting the risks of death in consequence of the most simple wounds. I shall now allude to a vibrio which has not yet been noticed, whose properties cast new light upon the great "rock" of surgery—'purulent infection. When we take for seed, from a culture *in vacuo*, some drops of common water, it may happen that we obtain a single organism, because common water frequently contains certain germs in unity, when taken in very small volume. This is even a means of separation of germs. If the cultures thus made with diverse common waters be multiplied, the vibrio of which I desire to speak is frequently met with, whose principal characters are these. It is a being at once aërobious and anërobious. In other terms, cultivated in contact with air it absorbs oxygen and gives out an equal volume of carbonic