

it,—“Cases should be pondered, not numbered,” and if we are to derive any benefit from these statistics at all, we must look into the details of them. Out of the various operations I have performed, some were, from the condition of the cases, capable of being performed antiseptically; in others this was, from the condition of the cases, impossible; as in cases where sinuses had existed in the vicinity of the joints which were excised, the removal of the tongue and so forth, where we operate in situations where septic materials must of necessity be present. No if I divide my operations into two groups—antisepic and septic—I find that my antiseptic operations were 553; and of these 553, only two died, and those of blood-poisoning. And then, when we look into these, we find there was one case where the mamma had been removed, and the whole axilla had been cleared out to the collar-bone. I knew that the spray was altogether away from the wound, when the tube was removed from the axilla. The other was a case of erysipelas; the only death from erysipelas in antiseptic cases during what I cannot help regarding as an epidemic of erysipelas during that year, or one from erysipelas. Of the septic cases, though they were much fewer, 292 operations, we have four deaths from blood-poisoning; that is to say, the deaths were eight times as numerous in proportion. That seems to be very instructive. Then, if I divide the time into two periods—before the meeting of the Association in 1875 and the time after—I find, as might be expected, that matters had improved since that period; 1871 was the date of introduction of the spray, and at first we were working comparatively under difficulties. But since 1875, the antiseptic treatment has been carried out more perfectly; and accordingly I find that, whereas between 1871 and 1875 the per centage of deaths was 4.7, from 1875 to 1877 it was 3.8; that is to say, out of two hundred and ninety-five operations, I had only eleven deaths. Then, if I look at the question of blood-poisoning in the last two years, I find that out of those 295 operations, to which must be added a certain number of accidental wounds, I had only one death from blood-poisoning; and that one case from blood-poisoning was a case of pyæmia, where I performed a plastic operation to make a new nose. I endeavored to turn one side of the ascending process of the maxillary bone to make a support for the flap, and I split the bone; and I was conscious at the time I had made a mistake. That was a case in which antiseptic treatment was impossible, in consequence of connection with the nasal cavity. The patient died; and, although I carefully searched and dissected the bone and the veins in the vicinity, there was no pus in the cancelli of the bone or in the vein leading from it; nevertheless, there were abscesses both of the lungs and liver. That is the only case of blood-poisoning in two years, with 295 operations.

Then let us take amputations; that is to say, major amputations. During the period referred to—five years and three-quarters—I had eighty major amputations. Of these I had nine deaths, 11.25 per cent. That, compared with what Mr. Erichsen says in his book on *Hospitalism*, where he says we must expect from thirty-five to fifty per cent. of mortality, may seem very good. I should not be satisfied with nine deaths out of eighty patients, without something more to explain them; but if we look more into details, I had, first of all, three amputations of the hip-joint. One was a primary amputation. I did the operation practically without any hope of saving him; but I have seen a patient come round after being perfectly pulseless, and I thought it my duty to try it. Of the other two amputation cases, one was an enormous fibroma. The operation was one of extreme difficulty, and the patient sank as the immediate result of the operation. Such a case as that has no bearing whatever on the question at issue. The third case was one upon which I operated for myeloid disease of the thigh bone. The bone looked sound when I divided it at the time; but afterwards, on making a careful section and microscopic examination, there appeared to be disease, and I amputated the next day, at the hip-joint. The patient died in twenty-four hours. Now, with respect to the question of preventable mortality after operations, you may eliminate these hip-joint amputations. I have had four primary amputations of the shoulder-joint. One of these died. The case was one of railway injury. The bones were shattered, and he was in a state of collapse when he was admitted, and never rallied; and that comes in very much the same category. The question was whether I was prudent in amputating at all. Then I had one death after amputation of the shoulder from disease. It was a case of malignant tumor of the arm. The amputation was doing perfectly well; but, after some days the patient died of hæmorrhage from a tumor of the femur, of the existence of which I was not aware, and that had nothing whatever to do with the amputation of the shoulder-joint. Some vessel gave way in the thigh, and the patient died of internal hæmorrhage; and these cases to which I have referred should be eliminated from my list with reference to the question of hospital mortality. Then we come to the two others. I had twenty-five amputations of the thigh for disease. Of these, one died; but the patient died of diphtheria nine months after the operation, when the cicatrix was almost complete. I had eighteen amputations of the ankle, of which one died. This one was a boy, who, three months after the operation, when the wound was almost absolutely healed, died of cerebral hæmorrhage. This, therefore, was also a case of recovery; and, therefore I submit that, when we look into these cases of amputation, no patient died from a preventable disease. Every patient recovered who had a chance of recovery.