LATER ANTISEPTICS IN PRIVATE SURGICAL PRACTICE.*

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In discussing the treatment of wounds, a subject confessedly the most important in the whole domain of surgery, we have no longer to ask, "Shall antiseptics be used?" That question has been answered, and in its place have arisen the queries "What antiseptics shall we use?" and "How shall we use them so as to obtain for our patients the greatest safety and benefit, and for ourselves the least trouble and expense?" The principles which underlie their scientific use, and with which for all future time the honored name of Sir Joseph Lister will be associated, briefly stated, are:—1st. That in the air, in fluids, and in the dust around us there exist particalate living bodies which may gain access to any wounds not subcutaneous. 2nd. That entering a wound they are the active agents in setting up putrefactive fermentation in its discharges. 3rd. That if they are absolutely excluded or are rendered innocuous, fermentative changes, with their frequently disastrous consequences, will not ensue. These principles the surgical world has, either in words, or in actions that speak louder than words, accepted as proven. Founded upon them we had till recently only that system worked out by the father of all antiseptic surgery, and known by the name of Listerism. It aims to prevent the entrance of germs into wounds, and to keep these wounds strictly aseptic. Volkman modified this by washing the germs from the wound while it was exposed, and then protecting it from them by a dressing similar to Lister's. Billroth disregards the entrance of germs into wounds, or their presence in discharges, but depends on destroying their power for evil by the presence of an antiseptic powder. While carbolic acid remained the only or the chief antiseptic, no modification of Listerism was advanced suited to the requirements of private practice. The original method of Lister, befogged with spray and enshrouded in the folds of a mysterious gauze, the proportion of antiseptic, in which might be anywhere from 5% to ½ of 1%, poisoning the patient or keeping his wound sodden and in an unfavorable state for rapid healing, irritating the wound till its discharges soaked through the thickest dressings, intricate, troublesome and expensive, had but one thing to commend it to the general practitioner. That one thing was the success attending its full and careful use. My practical experience with it began in 1873, in the treatment of a compound fracture. Ever since then I have followed, sometimes perhaps afar off, the practice of the Lister school. By doing so I have reached some results that by ordinary methods, I could not have hoped for. Of these I shall mention here only one series: Five penetrating wounds of the knee-joint, chiefly axe-cuts, recovering perfectly and promptly. It is but just to say that ice supplemented the action of the antiseptics in each of these cases. In the treatment of less grave wounds, I have like others been seeking constantly for simpler, safer and less costly methods. The spray I long since abandoned for the douche, and the unstable carbolized gauze for that prepared at the time of use with Von Brun's solution. But it is only since the later antiseptics appeared and their value was demonstrated, that I have felt the slightest danger of becoming a contented routinist.

Named in the order of their importance these are: The bichloride of mercury, iodoform, boracic and salicylic acids. Within the last four years they have been employed by numberless careful observers, and conclusions as to their safety and relative value have been reached. The most exact and extensive of these observations have been made in Germany. Based upon the methods of their use in that country, as described in recent literature, or as followed or modified in the New York, Roosevelt, Mount Sinai, and German hospitals of New York city, where I have lately had opportunity of studying them, I wish to describe a method of wound treatment particularly adapted to the needs of private surgical practice. At the same time I do not wish to go on record as advising that any one method of treatment be used for all classes of wounds. The shoemaker who works on a single last is not the one who fits his customers most exactly.

The aseptic condition, close approximation, drainage, the elastic pressure of dry and absorbent dressings, rest and protection, *these* are what we should aim to secure, and through them by the method now to be described, we may expect most

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