Prominent among the circumstances which concur to bring about unfavorable results must be mentioned *a solution that is too dilute*. The injurious effects which result from this cause are chiefly due to the mechanical distension of a large quantity of liquid. This, by rupturing the smaller blood-vessels, permits subcutaneous extravasations of blood, and, by separating a large surface of cellular tissue, and exposing it to the action of a foreign fluid, furnishes conditions admirably adapted to induce inflammatory action.

Another circumstance—one more potent for evil than the former—is *a solution too strongly acid*. I formerly used a solution of strychnia, made with dilute phosphoric acid, as being much better than one made with sulphuric acid. It is certainly true that a smaller quantity of the former is as effectual as a larger amount of the latter, yet I have latterly discarded all solutions in which a mineral acid is used as a solvent, and now employ one made with acetic acid. This, being an organic acid, does not seem so irritating to the tissues in which it is thrown, while its solvent power is certainly as great as that of either of the others.

The *kind of needle used* is also of great importance. Judging from analogy we should be inclined to think that the nature of the materials entering into the composition of the needle would be of interest when the subject of the causation of abscesses is under consideration. The liability of all steel instruments to become tainted and poisoned from long usage is a fact well known to surgeons and instrument-makers. * * * No amount of attention on the part of the physician will enable him to keep a steel needle bright, clean, and in good condition when the solution he uses has an acid reaction. The inside will be corroded in all cases, and sooner or later the outside will get into the same state. The material possessing the greatest advantage of which it is possible to make a needle is gold. This metal, as is well known, is admirably adapted to withstand the influence of both strong and weak acids, and never corrodes. It is, therefore, entirely free from the danger of becoming poisoned, and thereby producing abscesses.

Of fully as much importance as any of the points mentioned is *the size of the syringe* and *the method of manipulation* in