

we can decide exactly what sized needle or trocar to use, and how deeply it must go. In the case of small effusions, and also in empyema in infants, we may use the hypodermic syringe alone, repeatedly removing small quantities of fluid.

In many other circumstances we may also employ this method. In the case of abscesses seated near the surface of the body, such as some hepatic abscesses, perityphilitic abscesses, and the like, and in a large number of swellings in limbs, &c., of doubtful nature, which come rather under the care of the surgeon, we may gain most valuable information. But this is not a fitting occasion for pointing out all the uses to which it may be applied.

Before summing up the points in favor of its use, let me say a word of the kind of instrument to be used and the method of use. First of all, to fulfil all the conditions, it is essential that the needles should be fine, with a grooved and very sharp point, that they should be made of polished steel, and that they should be kept well tempered and scrupulously clean. The syringe should be rather large, made of glass, with metal fittings, and the piston always well soaked. The junction of the needle with the syringe must be thoroughly air-tight. It is essential that the operation of puncture should be as nearly as possible painless, that we may be able to tell the patient that it is less than a pin prick, and justify our statement. The needles should not be less than one and a quarter, nor as a rule more than one and three-quarter inches in length. The diameter should not, I think, exceed one millimetre. These details are not unimportant, for a very large number of common hypodermic syringes do not fulfil these indications, and I believe that they are essential if the pain is to be reduced to a minimum. Where it is desirable only to remove a moderate quantity of fluid, from one to one-and-a-half ounce (even a smaller quantity may sometimes be removed in empyema of infants with advantage), I employ a larger syringe, holding about an ounce, which is screwed on to the needle *in situ* after screwing off the small syringe.

As to the method of use, little need be said. The site of puncture having been determined upon, the ball of the left forefinger is firmly pressed into the intercostal space at the spot