

the local injection of cocaine, or the use of the ether spray being sufficient. In children, chloroform is fairly safe in uncomplicated cases, and I think its administration is to be advised in almost all cases, even for aspiration; for the terror excited in children by any of these operative procedures is probably nearly as dangerous as chloroform anesthesia and certainly much more disagreeable.

What is the best method of drainage? On this opinions differ, but the majority favor a rubber tube one-quarter or one-half inch in diameter, and only sufficiently long to enter the pleural cavity. If the interspace is not wide enough to admit it easily, a portion of rib had better be excised to allow the free insertion of the tube at times of dressing; in this way the dressings are much less painful and the drainage much more perfect. Many practitioners prefer drainage by syphonage to the open free drain, and they have had the most gratifying results by that method. I am not prepared to offer an opinion on the relative merits of the two methods, as I have had no experience with the syphon; but many who formerly advocated and used it exclusively, have now discarded it for the open drain, with strict antiseptic measures. It is very important that the tube be removed as early as possible, as its presence is sufficient to prolong the discharge. In few children is it necessary to retain it longer than about two weeks, in some a few days suffice; in adults it must be retained until the discharge is almost completely dried up. If the tube be removed too early, the temperature will soon indicate the necessity for its re-introduction.

Shall we wash out the pleural cavity? There is room for dispute here. Writers with few exceptions answer this in the affirmative, though most of them admit that the proceeding is not devoid of gravest danger. In the treatment of purulent collections in any part of the body, the first requirement is to give free vent to the pus and prevent the retention of any part of it. To do less is repugnant to true surgical instincts. If this is done and suitable antiseptic dressings applied, nothing further will be required in any acute suppurative process. Any meddling with the cavity can do no good, but will probably do harm by interfering with the union of opposing surfaces or the organization of granulations.

Empyema is but a pleural abscess, peculiar in

having a more or less rigid outer wall, a yielding elastic inner one and close relations with vital organs that are very susceptible to impressions. In the treatment of empyema if we secure perfect drainage and complete antisepsis, we have fulfilled our duty and a cure will soon result. If we fail in these objects the results will be imperfect, and the usual course is to endeavor to make up for the deficiency by the use of antiseptic washes to remove residual pus and correct or mitigate its septic properties. While collections of pus in the liver, large joints, the peritoneum, or even the brain, may be washed out almost with impunity, similar treatment of pleural collections is attended with grave dangers, and death is liable to result unexpectedly during or after the operation. The death roll from this cause is a large one. In all the fatal cases reported, the unpleasant symptoms have occurred only after repeated washings, always during the entrance of the fluid, but never during the first washing. The most frequent cause of these sudden deaths is probably syncope, due to the suddenly increased pressure or reflex disturbance.¹² Sudden withdrawal of large pleural effusions may have a similar effect by lessening pressure and allowing rapid dilatation of the auricles. In some cases the injected fluid causes occlusion, by its pressure, partial or complete, of the vena cava inferior; such a case occurred to Fraëntzel. Another cause of sudden death is cerebral embolism, from clots loosened in the veins of the lungs, by increased pressure. Some substances as sodium salts, nitric acid, chlorine, are poisonous to the heart and should not be used under any circumstances. Fluids used too hot or too cold may have equally disastrous effects. In view of these dangers, it is quite evident that washing out the pleural cavity should not be done as a mere matter of routine, a practice which, were it even not dangerous, is wholly unnecessary. We should not resort to it, when it is feasible to pursue the more rational method of enlarging the opening in the chest, by resection of ribs, for the purpose of free drainage and removal of fibrinous deposits with curette or other suitable means. It is in the highest degree reprehensible, under any circumstances, to distend the cavity with a view of ascertaining its capacity. Lastly, if washing out the cavity is necessary, it should not be entrusted to an unqualified assistant. Instead of washing out the cavity, some have tried the insufflation of disinfectant powders, especially iodoform, with fairly satisfactory results.

12. Medical Chronicle, Aug., 1887.