the drainage tube, if a hard tube be used, much irritation is produced, if soft rubber it becomes obstructed. Cases are reported where tubes are left in the chest too long, perforation of the lung and diaphragm have taken place. Should the patient not rapidly improve, a very free opening should be made and the pus forming cavity cleared of all its contents. There are twenty cases reported as cured by syphon drainage in the "Annual of the Universal Medical Sciences, 1888."

3. *Pleurotomy.*—The dogma promulgated by Hippocrates that it was dangerous to freely and rapidly evacuate a pus sac, prevented many a sufferer from being relieved or cured. It is true that aspiration and simple drainage should first be tried without losing valuable time, but by a free opening we not merely remove the pus, but also large fibrous masses, gangrenous debris, hydatids and putrifying materials which produce septicæmia and death. The lung is given an opportunity to expand and the ribs are permitted to fall in.

Pleurotomy may be performed by simply enlarging the opening for simple drainage, if already existing, or should the space between the ribs be too small for free drainage, a V-shaped piece may be removed from the upper border of the rib with the bone forceps, or what is still better, is to trephine the upper portion of the rib, for it not merely furnishes a free but also a permanent opening which cannot be closed by the approximation of the ribs, which are the objects for which this operation was instituted. The opening should be kept patulous by a large but very short tube, the chest thoroughly and regularly washed out and antiseptic dressings applied. The statistical results of free drainage are very encouraging. The collected cases of Dr. Eddison show a recovery of 78 per cent. (Ashurat.)

4. The fourth operation advisable in order to radically cure pyo-thorax, is Thoracoplasty, known as Estlander's operation. It is the removal of a portion of one or more ribs allowing the chest wall to collapse, and thus obliterate, if possible, such cavities as are met with in chronic cases. It is indicated in all cases in which the foregoing measures will not effect a cure, that is, where the lung will not expand and the chest wall will not fall in any farther, but still a cavity left which secretes pus constantly, inducing anæmia, pthisis, lardaceous disease, etc. Estlander treated successfully five of his six cases operated upon. E. Moutard-Martin cured 12 out of 17 subjects.—(Pepper). Dr. Bœckel reports a case in which he dissected a portion of seven ribs and part of the scapula, and cure effected. I have performed Estlander's operation three times, twice upon the one person and once upon another. The first of these was J. S., age 17 years, who was admitted into the Winnipeg General Hospital on the 28th of December, 1886, with the following history:

About the middle of June, 1886, he was taken with pleuritis. He had no medical attendance till some 6 or 8 weeks, before when Dr. Cody, of Selkirk, visited him. The right chest was then filled with effusion, but, I am told, not purulent. His attendance being such as the home of a half-breed family, in fair circumstances, could but afford, the Dr. advised him to come to the hospital. The family history was good. I first aspirated and removed 32 ounces of pus. In a few days afterwards I trephined the upper border of the 6th rib in the mid-axillary line, and drew off 80 ounces of pus in which were many locculi. After this, with frequent washings, antiseptic dressings, iron, quinine, cod-liver oil and the full hospital diet, he improved very much, gaining considerable weight, and was soon able to walk about and do little chores around the hospital. On the 7th of June, 1887, he was sent home, with full instructions how to attend to himself, which were not followed out. He got worse and returned to the hospital on the 1st of August, 1887. The change of diet and cleanliness improved his condition somewhat but not materially. The lung remained collapsed excepting the apex, and the chest wall receded so that all the ribs touched one another, and yet a surprisingly large cavity remained. It was somewhat triangular in shape, extending from the 2nd rib to the diaphragm, its base was co-terminus with the full breadth of the right chest over the diaphragm and its apex