

and with the persistency with which I used it in my practice. In about twenty families where there were cases of the disease, I had the unaffected members of the family use the atomizer, and in but one instance did the prophylactic treatment fail of success.

**HEART FAILURE IN A CASE OF ASCITES AND HYDROTHORAX RELIEVED BY THE INTRAVENOUS INJECTION OF AMMONIA.**—(*Clinic by Prof. Flint, New York.*)—The next case that I have to show you is one that most of you will, no doubt, remember as having been before the class last week. I will not read the history over again, but will simply remind you that the patient had had hydroperitonæum, for which she had been tapped soon after her admission to the hospital (which occurred three days before), and that the pleural cavity of the right lung was still filled with liquid at the time you saw her. A week ago I dwelt upon the connection, as a general rule, of hydroperitonæum with cirrhosis of the liver, but stated that although in the majority of instances it was found that the latter stood in a causative relation to the former, there was no evidence to cause us to believe that this patient had been addicted to the use of alcohol. As this is the accepted cause of cirrhosis of the liver, we therefore concluded that the present was one of those comparatively rare cases in which hydroperitonæum existed without cirrhosis. A considerable amount of fluid had been removed by the tapping, and the patient, you will remember, was weak and quite nervous.

The subsequent history of the case has proved a most interesting one, and it is on that account that I have brought it to your attention again. On the day that you last saw her the patient began to suffer very greatly from nausea, without being able to vomit much, and the ineffectual efforts which she made towards emesis caused her much distress. She was ordered a half ounce of whisky every three hours, but in spite of this did not seem to gain any strength, although she did not suffer much from dyspnoea. The following day she was still found to be very weak, but with no marked dyspnoea, and it was now noted that she was quite apathetic, so that she had to be persuaded to take her nourishment and stimulus. On the day after that the house physician was hastily summoned by the nurse, on account of the extreme exhaustion of the patient. When he reached the bedside he found her almost completely unconscious, that she would continually slide down in the bed, and that she could not be aroused to take notice of anything. The eyes had a vacant stare, the pupils were dilated, the tongue was dry and brown, and the jaw had fallen, so that there seemed to be no question that she was actually moribund. Under these circumstances paracentesis thoracis was promptly

resolved upon, and ninety ounces of fluid was thus withdrawn from the pleural cavity. During the operation ten or twelve half drachms of whisky were administered hypodermically; but in spite of this the pulse, which had before been very weak, disappeared altogether at the wrist, while the cardiac impulse grew so feeble that it could scarcely be felt at all. It had been hoped that when the fluid had been removed, and the lung thus allowed to expand, so that respiration might be more satisfactorily performed and the blood more readily oxygenated, the evidently failing forces of the patient would rally, but this did not prove the case. The hypodermic injection of whisky having been found to be of no service in overcoming the extreme exhaustion present, half a drachm of liquor ammoniæ, diluted with an equal quantity of water, was injected directly into a vein of the arm, care being taken first to expose the vessel by dissecting up the skin over it, and that the needle of the syringe directly entered its lumen. The cutting of the skin did not make the slightest impression upon the patient, who was now apparently altogether unconscious, but in ten or twelve seconds after the liquor ammoniæ entered the circulation there was a marked increase in the strength of the pulsation of the heart. At the end of two minutes the pulse could again be felt at the wrist, and after two minutes more she gave a sigh, and began to rouse herself. She was soon able to take four ounces of egg-nog by the mouth, and in half an hour from the time that the ammonia was administered she declared herself to be quite comfortable, and was breathing more naturally than she had done at any time since her admission. From this time on she took a considerable quantity of egg-nog, which was very well borne, and by evening was still further improved in every way. During the next two days she continued to grow better, and on the third, which was the day before yesterday, she felt well enough to sit up for a time.

I have been exceedingly interested in this case, and the various features of it have been so well brought out in the history that I have just read that it seems scarcely worth while to make any remarks upon it. Still, in order that the most important points may be the more strongly fixed in your minds, perhaps it will be well for me to make a few comments upon them. Here was a patient, with a large accumulation in one of the pleural cavities (having previously had hydroperitonæum in addition), who continued to grow weaker day by day, in spite of the most persistent stimulation, until at length the house physician was called to her bedside to find her actually moribund, as indicated by her whole appearance and condition. Whatever was to be attempted for relief, therefore, must needs be done as promptly as possible. First of all it was resolved to remove the fluid from the chest, under the hope that by