

## TREATMENT OF ŒDEMA OF THE LUNGS.

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Œdema of the lungs is a condition which always presents the greatest danger. In very many cases does it lead directly and immediately to a fatal termination; in others, the condition persists for a longer time, the œdema pursuing rather a chronic course, and the patient lying in agony for days. A varied course of treatment must naturally be pursued. The most severe cases are those in which the œdema depends in part on an increased aptitude of the lung-parenchyma to transudation—in part also on weakness of the left ventricle. Formerly in these cases venesection was performed; to day, however, this is not done. In the first place, it is our duty to strengthen the heart. This is accomplished by remedies which are given internally, when indeed the patient is conscious and can swallow, and for that purpose we give those stimulants which act most rapidly, viz., the champagne wines. Champagne has the reputation of being the strongest excitant among the wines; this is, however, not exactly correct: it is not the strongest, but the most rapid and surest in effect. It has been thought that in champagne the actions of the alcohol and of the carbonic acid are united. They are not united, however, but rather the action of one supports that of the other in this way, that the alcohol is more rapidly absorbed. Quincke years ago made experiments in reference to this, and proved that when alcohol and carbonic acid are introduced together into the stomach, the alcohol is thereby more quickly absorbed, and thus is explained the rapid, exciting properties of champagne. Stronger stimulation is produced by the heavier wines, which contain more alcohol; but, although champagne contains much less alcohol than our heavier wines, such as Hungarian, Burgundy, etc., its effect is much quicker, and therefore in cases of œdema it should be given. Secondly, we give strong black coffee with, as a rule, the addition of brandy, rum, or arrak, or we may give internally a few drops of sulphuric ether. In many cases the patients cannot swallow, and then we must try to keep up the heart-power by hypo-

dermic injections. Formerly sulphuric ether was usually resorted to for this purpose, and it is still much used, but I recommend to you as much better, injections of camphor. You can also, as is sometimes done, combine camphor with ether, although I do not consider this very advantageous. There are cases in which one must give several injections, 2—4—5 quickly after one another, because a single one does not suffice. Care should be taken lest, in the use of ether for its primary exciting action, you produce a stupefying and paralysing effect which comes from large doses. I am in the habit of using, in my experiments on the lower animals, subcutaneous injections of ether in order to narcotize them. I make in rabbits 3—6 injections beneath the skin, and they become thereby as completely narcotized as if the ether had been inspired. An analogous result must also occur in the case of man, in whom the stupefying effects must also certainly appear. Therefore, I prefer for stimulation, subcutaneous injections of camphor dissolved in oil of sweet almonds or in olive oil. The solution according to the German and Austrian pharmacopœias is, one part camphor to nine parts fat oil, and sold in the apothecary's under the name of camphorated oil, and of this you have one centigramme of camphor in each Pravaz syringeful. Our object is further to limit the transudations of fluid from the vessels into the lung tissue and bronchi. With this object ipecacuanha, benzoic acid, and other medicines have been recommended, but I know of only one treatment for these cases, and of which Traube was the author. I am not aware that this treatment is much practised. I have, however, published it for years under the authorship of Traube, and have used it in a whole series of cases with good results. I can recommend this treatment to you as the best after the stimulants. It consists in the administration to the patient of large doses of acetate of lead in powder, five centigrammes every  $\frac{1}{4}$ — $\frac{1}{2}$  hour, until four or five doses have been given. When the symptoms are abated, we give it every hour or two hours, according as it is required. You are aware that acetate of lead causes contraction of the blood-vessels. A second mode of treatment, which I make use of next to the ad-