

three years ago I sent out over eight hundred communications to all parts of the civilized world requesting reports, favorable or unfavorable, from the internal administration of the suprarenal. I received but eight replies stating that my letter was duly received and that it would shortly be published. Up to this late day I have not received personally, from this source, one report of a case treated with the drug.

In the *New York Medical Journal* for October 6th, 1900, I published my first paper, entitled "The Use of the Suprarenal in Organic Diseases of the Heart—a preliminary report." In the same journal, in 1901, I published an exhaustive report on its use in organic heart disease. In the *Medical News* for January 4th, 1902, I published forty-five cases of hemorrhages from various causes treated with the suprarenal. In the *New York Medical Record* for November 17th, 1900, I published a report on the use of the suprarenal in diseases of the lower air passages.

*Preparations.*—We have the dried and powdered suprarenal substance, which is designated as suprarenal extract. We also have the alkaloid, better termed the active principle, which is called adrenalin. Solutions of the suprarenal extract do not keep, but solutions of adrenalin chlorid keep indefinitely, are reliable, and are non-irritating. Whenever in the future I speak of only suprarenal as such I also mean adrenalin chlorid.

*Administration.*—The powder is administered internally in three grain doses either as a powder or, better, in capsule form. The active principle is administered internally in the form of a solution, the strength of which is 1:10,000 to 1:1,000, in doses of from five to fifteen drops. To get the best results it should be administered frequently—from one to three hours or oftener, as the case may require. The solution is dropped on or beneath the tongue for very rapid effects, or it can be swallowed. Some now advocate to use it hypodermatically and by electrolysis. As to the hypodermatic use of the drug I believe it is unnecessary and I have never been in favor of its use. If an adrenalin preparation is at hand, a few drops can be rapidly placed on or under the tongue and its action will become apparent in about the time it takes to get a hypodermatic syringe ready for action. An effect was produced within twenty seconds when adrenalin chlorid was dropped under the tongue. Most all of you know that when you are in a great hurry, the syringe often fails to work properly and much valuable time is lost. I have read in literature that the hypodermatic administration of the solution (otherwise called the subcutaneous injection) had been given in collapse and the site of the injection was often very painful and that this form of administration was dangerous. Solutions in the strength of 1:10,000 have been known to cause great irritation while stronger solutions have given rise to gangrene and subsequent sloughing.