

Adrenalin in Medicine

2—Treatment of the Paroxysm of Asthma

THE fact that Adrenalin promptly relieves the paroxysm of bronchial asthma has been demonstrated in thousands of cases. Explanation of its mode of action, however, must be couched in the language of probability and speculation, because the pathogenesis of the disease is the subject of an ever-increasing number of theories and much controversy.

Among the more reasonable and credible of these theories are: 1, Anaphylactic manifestations in the bronchial mucosa from bacterial protein sensitization; 2, The same condition produced by sensitization to food proteins (allergy), pollens of plants and animal emanations; 3, Reflex vagus irritation of the bronchial mucosa from peripheral afferent impulses originating along the course of distribution of this nerve.

It is not unlikely that every case of bronchial asthma can be explained by one of these theories, and that, indeed, in some of the cases more than one of these factors are underlying. Regardless of the theory or theories applicable to any given case, the immediate mechanical cause of the distressing paroxysm is a sudden spasmodic stenosis of the bronchioles.

The action of Adrena-

lin is to relieve this stenosis. Whether the dilator muscles of the straitened tubules are stimulated or the circular constrictor muscles are temporarily paralyzed by Adrenalin to bring about this change in the calibre of the bronchioles cannot be definitely stated. It is interesting to note in connection with the protein sensitization theory that anaphylactic phenomena elsewhere in the body are often favorably influenced by Adrenalin—especially in respect to the skin manifestation, urticaria.

Adrenalin is the best emergency remedy for the treatment of the asthmatic paroxysm at the command of the physician. Two to ten minims of Adrenalin (1:1000) are given subcutaneously, or preferably intramuscularly. Frequently only five or ten seconds elapse after the injection when partial alleviation of the dyspnoea is noticed. In a few minutes relief is complete. Adrenalin acts quickly or not at all. In those few cases in which no favorable effect becomes apparent after the first injection this medication should not be pushed. Some practitioners have noted that the injection of Pituitrin in combination with Adrenalin (equal parts) enhances and prolongs the action of the latter.



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