

the bowels at two different points, at which localized inflammatory action had alone taken place, and it was impossible to pass through either anything but the finest wire probe; death resulting literally from gradual starvation, as he was not able to retain more than a teaspoonful of only liquid nourishment. His leg united perfectly, and there is little doubt that with our present familiarity with abdominal surgery, and Murphy's button, a successful effort might have been made to save his life.

### SOME OF THE USES AND ABUSES OF THE NITRITES.\*

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The nitrites are a group of remedies which includes the nitrites of sodium, potassium and nitroglycerine, or glonin, as it is now named in the New Pharmacopœia.

They are a somewhat important class of remedies, being prompt in action, but of short duration, and demanding their frequent administration to maintain continued effects.

In order to have an intelligent understanding of their therapeutic uses, it is necessary to know something of their physiological action; and while clinical experience may be the touchstone which solves the mystery of remedial agents, a good knowledge of pharmacodynamics will often restrain or prevent the employment of remedies whose administration would prove prejudicial to recovery. When taken they cause a sense of cerebral fulness, flushed face, pain in the head, rapid heart beat and lowered blood-pressure. The rapidity of heart-beat is caused by their depressant action on the inhibitory branches of the vagus, and to the sudden relaxation of the terminal arterioles in front from vaso-motor paralysis. The flushed face is caused by the dilatation of the capillaries, and the lowered blood-pressure to the lessened resistance in front. It may be accepted as a fact, to which there are but few exceptions, that when there is very little resistance in front, that is low-

ered blood-pressure, the heart endeavors to make up or compensate the loss by increasing the number of its contractions, and when we employ an agent like the nitrites which also paralyses the inhibitory centre, the number of heart beats is greatly increased.

On the nervous system their action is not so marked, but they take rank as sedatives or depressants, confined to the motor tract of the cord. In the blood they transform hemoglobin to methemoglobin, and thus lessen or destroy the oxygen-carrying function of the corpuscles. The blood becomes venous and of a chocolate color, with consequent lowering of body temperature, due to decrease of oxidation and increased radiation of heat from the dilated capillaries.

I have entered somewhat fully into the physiological action of this group of remedies, believing that it is impossible to intelligibly administer drugs without having a knowledge of their pharmacodynamics, and as "practice without theory is blind," it is just as important to know when not to employ a certain remedy as it is to know when to use it. Sometimes it demands a better knowledge and acquaintance with the principles of therapeutics.

The diseases in which the nitrites have been found beneficial are those of a spasmodic nature, whether local or general, such as whooping-cough, spasmodic croup, hystero-epilepsy and convulsions of children. Hystero-epilepsy and simple hysteria I have found to yield to a single dose of glonoin. In interstitial nephritis the nitrites, especially the glonoin in combination with digitalis, are useful. In this disease we have heightened blood-pressure, owing to spasm or constriction of the terminal arterioles, and an hypertrophied left ventricle, a condition of affairs which, if not cured, is relieved by the nitrites. Death from croupous pneumonia always comes from cardiac failure. When there is impending failure of the right heart from over-distension, the nitrites, by dilating the arterioles, thereby diminishing the work which the heart has to do and causing an equilibrium in the distribution of the blood, have been found of benefit, particularly if employed on the first appearance of the engorgement.

Migraine, when there is a spastic or constricted condition of the cerebral vessels, is sometimes relieved by their administration. Other conditions

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