

its range is so extensive that it practically embraces the entire domain of curable diseases and disorders. It does not even stop here, but may be employed to ameliorate the symptoms of organic incurable disease, a notable example of which, among the scleroses of the spinal cord, being locomotor ataxia. We may, however, profitably consider certain groups in which it is most valuable. The acute infectious diseases, typhoid fever being par excellence the type, offer opportunities for the application of hydriatics with the promise of unsurpassed and unequalled results. In these diseases the bath of Brand, a full bath at 65° F., accompanied by friction, still holds the first place, but many practitioners have found that the grim monster can be held at arm's length by simpler and easier-applied bath methods. To those practitioners who fear to use what they term "heroic measures" may be recommended in these febrile disturbances the cold sponge, and cold compress applied over the abdomen. The sponging should be done with a rough or crash rag in order that sufficient friction be developed to produce a cutaneous dilatation of the blood vessels, while at the same time we obtain the thermic impression of the cold water.

In acute inflammatory disease of the viscera, of joints and soft structures, we may expect relief of pain, comfort, and speedy dissipation of the disease where hydrotherapy is intelligently and properly applied. In these inflammations the author has secured signal results from the fomentation applied at a temperature of 140 to 160 deg. F. followed by the cold or stimulating compress or by the partial or half pack at a temperature of 65 deg. F. for periods ranging from one-half to three hours, at which time the compress may be again repeated.

In tuberculosis its effect is wide-reaching, stimulating the appetite and capacity for food, increasing glandular secretion, digestion, and assimilation, and by raising the leucocyte count and opsonic index favours destruction of the bacilli and a repair of tissue. In conjunction with fresh air and proper food it helps to form a tripod upon which the therapeutician may lean with comfort and assurance, provided the tubercular process has not gone too far.

But in the domain of chronic disease, no matter where located, we may expect with a reasonable degree of certainty that this agent will more quickly and more certainly relieve the patient than any other single weapon that we have at command. Seventeen years in the treatment of this class of patients leads

me to state that many diseases otherwise unamenable to ordinary measures may yet be certainly and promptly relieved by its intelligent, careful, and persistent application. To properly speak concerning its manifold powers in the treatment of these diseases would be to pass upon it a panegyric that would in its eloquence consume too much of this Congress' time and patience.

CONCLUSIONS.

(1.) An ancient measure, universally found possessing cleansing, antiseptic, thermic, and mechanical powers.

(2.) Its physiological action upon the human body is largely brought about through its disturbing influences of temperature and mechanical effects on the peripheral sensory nerves.

(3.) Brief applications followed by reaction do not particularly affect temperature, though temperature reduction may be best brought about by immersion accompanied by friction.

(4.) The circulation is increased on the surface by heat, is accompanied by dilated blood vessels, quickened heart action, and lowering of arterial tension. Cold contracts the surface blood vessels, slows the heart's action, decreases the pulse rate, and raises arterial tension; is followed by reaction with moderately dilated blood vessels.

(5.) Respirations are increased in number, lessened in depth, and oxygen and CO₂ diminished by heat. Cold, on the contrary, increases the amplitude and depth as well as the absorption of oxygen and the elimination of CO₂.

(6.) Metabolism in all its phases is effected by hydrotherapy, less in degree in the case of heat than with cold. As a tissue up-builder, tonic, stimulant, eliminant, depletive it is unequalled.

(7.) Upon the nervous system, the direct action of water through its thermic and mechanical effects is conveyed to the centre and there reflected in a thousand-fold way, producing results both tonic and sedative that make it a true nerve constructor.

(8.) Muscular tissue is relaxed and enervated by heat; stimulated, revived and toned 33½ per cent. by cold.

(9.) The blood is changed, leucocytosis induced, opsonic index raised, purification promoted, hemoglobin increased, corpuscles enriched, and the alkalinity made greater by these applications.

(10.) Its therapeutic field is wide in the acute infectious diseases, inflammations, and toxemias. It is the best single therapeutic weapon in chronic diseases and disorders.

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