

“ While the patient is in the bath he becomes flushed and a feeling of comfort and warmth ensues which may even rise to one of an agreeable intoxicating character. Almost invariably the excretion of urine is increased; exudates in the body cavities, especially from the peritoneum, pericardium and pleura, are absorbed. This latter action and that on the valves of the heart can only be explained on the theory of reflex action produced by influences acting upon the terminal nerves.”

Another explanation is that given by Dr. Bezley Thorn, that there is a dilatation of the muscular arteries and afterwards those of the skin, and thus there is a relief of the heart from backward pressure.

In Lauder-Brunton's massage experiments he demonstrates that more blood flows through the massaged part and that blood pressure at first rises and then falls, and that on the conclusion of massage more blood collects in the massaged part. These experiments were confirmed by Dr. Oliver.* T. Grainger Stewart † concludes that the passive exercises (1) improve the circulation of lymph within the tissues, and (2) bring a larger volume of blood into the muscles. He quotes the conclusion of Ludwig to the effect that the capacity of muscles for blood is equal to the combined capacities of the internal organs and the skin. If therefore this be so and Dr. Lauder-Brunton's experiments be correct, the increased amount of blood in the muscles must indicate a relief of the congestion in the internal organs.

In Dr. Schott's explanation there are two actions :

- (1) A cutaneous excitation induced by the mineral and gaseous constituents, and
- (2) A more prolonged stimulation of the sensory nerves excited by imbibition into the superficial layer of the corium. The salt producing this excitation is the calcium chloride.

Whatever the explanation of their action may be, two points seem established :

- (1) That the apex beat alters its position ;
- (2) The area of cardiac dulness is diminished. These two facts, especially the first one, were most strikingly obvious in our first cases, and both facts were most forcibly demonstrated to me in the cases which I saw abroad. One can scarcely credit the results published until he has seen for himself these marked changes.

The case reported by Dr. Bowles in the Practitioner for July, 1896, shows a change of 3 cm. in the apex beat before and after a bath of ten minutes' duration, and he says after

* Brit. Med. Jour., June 13, 1896.

† Ibid., Sept. 19, 1896.