

Immediately after the application the limb or part exposed to heat is washed with alcohol and quickly dried, and the patient allowed to follow his usual avocation. The treatment should be applied daily in acute cases; in chronic cases at longer intervals.

After applications the limb or part is extremely red and hyperemic, bathed copiously with perspiration, skin soft and pliable, and pain, if present before, entirely relieved or much improved. In the lower extremities patients often complain of a peculiar numbness of the limb, a fact which is entirely due to the position in sitting; the limb is markedly extended, and simple extension of the sciatic nerve will produce this condition either in or out of the machine, and has nothing to do with the action of heat upon nervous tissues. Often the circumference of the limb was considerably reduced; at times it was unchanged, a condition which no doubt depends upon the presence of subcutaneous oedema or effusion. The explanation as to the relief of pain is rather difficult. Ringer has shown that heat impedes or destroys the electrical currents of nerves, whence it may be fairly presumed that when subjected to this influence they are less able to conduct impressions to or from the brain. The action of the heat in such cases is a temporary one. If the case was allowed to rest with one application the patient might be entirely free from pain for several hours, and when it did return the pain would not be quite so severe as before the treatment. If the treatments are continued for any length of time there is a progressive loss of flesh and strength, amounting in one of our cases to seventeen pounds for thirty heatings. This case was one of double hydrops articuli of the knee, the patient refusing operation. He was led to try the hot air by way of an experiment. The result in this case will be given under the list of cases.

The greatest temperature applied at one time was  $400^{\circ}$ , and the lowest  $270^{\circ}$ , the average treatment being about  $320^{\circ}$ .

A short time after applications have been made we find that there is an elevation of the central temperature, the highest in our list of cases being  $100.1^{\circ}$  and the lowest  $98.7^{\circ}$ . The average increase of temperature was  $1.2^{\circ}$  F. The pulse is at the same time somewhat increased in frequency, the greatest being 120 and the lowest 92, showing an average increase in the pulse-rate of thirty-three beats per minute.

When very high degrees of heat are applied to the human body there is at first a violent vasomotor contraction and an increase of blood-pressure, but when a temperature of  $380^{\circ}$  F. of dry heat is applied there is a vaso-