

CLIMATIC TREATMENT OF CIRCULATORY DISEASE.

LOUIS FAUGERES BISHOP, A.M., M.D.
Visiting Physician Lincoln Hospital.
NEW YORK.

During the past four years it has been my good fortune to witness the beneficial effect of certain climatic conditions on certain forms of circulatory disease. It has, indeed, been a surprise to myself, accustomed to city conditions, to see how much is accomplished by treatment of certain cases of secondary low arterial tension, even when accompanied by such accidents as hemiplegia, in the climate of the lower Maine coast.

My observations were made at York. The first case was one of secondary low arterial tension following high tension in a man who had had a prolonged and anxious business strain. While under this strain this man suddenly developed hemiplegia and aphasia. When I saw him he was suffering from these conditions. The heart was dilated; there were loud murmurs at the base and apex. He could not make any exertion without shortness of breath, and was extremely depressed. In other words, he was suffering from all signs of a marked deterioration of the circulatory apparatus. The improvement in this case was very marked, so that by the end of the summer the man was able to take long walks, his paralysis and aphasia were much improved, and a process was checked which had every indication of progressing to a fatal termination.

Another case was that of a woman, also suffering from right hemiplegia and slight aphasia, in whom the secondary low arterial tension was just commencing. She also made vast improvement by the end of the summer, and had even for the time being recovered from the tendency to high tension.

The third was a case of a woman with low arterial tension secondary to an exhausted nervous system and the high tension of nervous strain. She also improved very much, but, the cause not being removed, the improvement was not so marked.

Now, it may not seem that climate had much to do with these cases, but a study of the effect of the climate and an analysis of its characteristics make it evident that for this class of cases the summer climate of lower Maine coast is particularly beneficial. The climate of the lower Maine coast has a remarkable combination of dryness with sea air and low temperature in summer. It is beneficial in all cases of physical exhaustion and to patients who require a restoration of the vitality after disease. The climate is wonderfully stimulating to nutrition. On the other hand, it is not beneficial to patients suffering from purely functional nervous diseases requiring rest. These patients are overstimulated and are apt to suffer from restlessness and insomnia. Still, patients with a tendency to melancholia and depressed conditions are much improved. The physical effect of the transition from the climate of New York to the climate of the lower Maine coast is really remarkable. Those unaccustomed to the change find a longer stay than six weeks too stimulating. So that many persons who make their summer home there find it beneficial to go inland to a less exciting climate for a rest in the middle of the season.

We all know how difficult is the task of restoring what we call vitality. This is a word so frequently on the lips of physicians that I have noticed that when first used to a new client it often excites a smile on the part of the patient. One said the other day: "Please do not talk any more about that thing you call vitality." Whether we talk about it or not, it is an important element with most chronic invalids, and it is the element that has seemed to me most benefited by this particular climate. The drawback with most seashore climates is the great dampness. The lower Maine coast escapes the fogs which are so prevalent to the north and south. The ocean is very shallow and the shore recedes here so that the fog bank lays off the coast, within sight, but seldom reaches the land.

The Survival of the Fittest.—Modern medicine has been accused of helping to deteriorate the human race, by preserving the weaklings, and thus arresting the law of the survival of the fittest; but surely preventive medicine is enabling the nations that are intellectually fit, to survive, while those steeped in ignorance, are decimated by preventable diseases.—Hampden, in *Albany Med. Ann.*

A METHOD FOR THE RAPID PREPARATION OF FRESH TISSUES FOR THE MICROSCOPE.

LOUIS B. WILSON, M.D.
Pathologist St. Mary's Hospital.
ROCHESTER, MINN.

While engaged in general pathologic work I shared the common distrust of frozen sections of fresh tissues for microscopic diagnosis. On taking charge recently of the laboratories of the Drs. Mayo, surgeons, I carefully tested the various methods hitherto published and found them either too slow for results while the patient waits under the anesthetic or else giving poorly differentiated cell detail. After considerable experimentation the following technic was discovered, and for the last six months it has given uniformly excellent preparations:

1. Bits of fresh tissue not more than 2x10x10 mm. are frozen in dextrin solution and cut in sections of from 10 to 15 microns thick.
2. The sections are removed from the knife with the tip of the finger and allowed to thaw thereon.
3. The sections are unrolled with camel's-hair brushes in 1 per cent. NaCl solution.
4. The sections are stained from 10 to 20 seconds in neutral Unna's polychrome methylene blue.
5. They are washed out in 1 per cent. NaCl solution.
6. They are mounted in Brun's glucose medium.

The microtome which I use is the Spencer automatic with a CO₂ attachment in which vulcanite is substituted for brass in the wall of the freezing chamber, thus insulating the freezing plate. Thawing the section on the finger prevents to a great extent the formation of bubbles. The well-made camel's-hair brushes used by artists are much more useful for handling tissues than those usually furnished by laboratory supply houses. A heavy, shallow watch glass over a black surface is the best receptacle in which to unroll sections. Sections are best handled in the stain folded over a lifter made of a small glass rod drawn out and bent at convenient angle. The section is kept constantly moving while it is in the stain. The stain is contained in a minute cup to facilitate the rapid recovery of the section should it slip from the lifter. Washing out is done in several ounces of salt solution in a white porcelain dish and is continued only while the stain comes away freely. Brun's glucose medium (which is made by mixing distilled water 140 c.c., glucose 40 c.c., and glycerin 10 c.c., then adding camphorated spirit 10 c.c. and filtering), is held in an oval dish of porcelain (an "undecorated match safe") of such a size that a three-inch slide will rest in a slanting position, with one end in the bottom of the dish and the other on its edge. The section is spread out on the slide while it is in this position. The slide is then carefully withdrawn from the dish, the excess fluid removed, a cover-slip dropped over the section and the specimen is ready for the microscope.

The whole process can be gone through in one and a half minutes from the time the tissue is placed on the freezing plate of the microtome until the stained specimen is on the stage of the microscope. The resulting coloring is uniformly good with the tissue elements sharply contrasted in red, purple and dark blue.

A diagnosis may be made from such preparations in a large percentage of surgical cases in which a diagnosis is possible by a study of sections of the same thickness cut from fixed tissues and stained with hematoxylin and eosin.

FRACTURE OF BOTH CLAVICLES.

SCHUYLER W. HAMMOND, M.D.
RUTLAND, VT.

On Oct. 17, 1905, Mrs. H. W. H., aged 54, while running clothing from a second-story window out on an endless rope, was precipitated 15 feet below by the breaking of the rope.

Careful examination revealed fracture of the right clavicle at its outer angle and of the left clavicle at its middle. The patient also suffered separation of the os innominatum from the sacrum at the right sacroiliac synchondrosis, with some traumatism to the sacral plexus of nerves.