

The therapeutic lesson to which I wish to call attention by the foregoing meteorologic study is that of the importance and advantage of selecting the climate in the care of pulmonary tuberculosis.

The present position of appreciation of the importance of fresh air, sunshine and nutrition in the treatment of phthisis has been slowly attained. The progress from drugs and palliation to the insistence on control of the simple, hygienic living, has been by stages. As in all lines of human thought, so in therapy, the tendency has been to see but one point at a time, — to lay stress on one factor to the neglect of others. In the general advance of our knowledge of phthisis and its care, one stage was marked by the great emphasis laid on climate, and we heard only of the climatic treatment, as distinct from the medical, as if climate was in itself an entity and a specific force.

A frequent result of this narrowness and separation of ideas was that patients were sent away for a "change of climate" to a supposedly "proper climate" away from home and allowed to shift for themselves, neglecting all details of control and hygienic living, placing such matters in the intelligent care of the climate. Much evil resulted from this course, as might have been expected. Many and marvelous cures were often made. Of the untold failures, many might have been avoided.

Gradually, as the appreciation of the need for close oversight and control of the patient became more keen, it was found that the discipline of a sanatorium was of great help. Patients were noted to recover their health at home with their own native "weather," without the aid of "climate," once more investing climate with an air of specific entity.

Then we heard for a while of "the sanatorium treatment" as distinct from the medicinal or the climatic, — another stage in our advance, but still marked by the old "one idea" tendency. The advantage which this sanatorium control brought about by its close oversight of all the details of life, food, outdoor exercise and so on, was seen in the cures resulting in many "closed institutions." Our present better knowledge of the disease and its proper management by control of all details of hygienic living out of doors is due, in part, to such study as was more possible in an institution.

As a result, there has been lately considerable remark by various writers that "climatic stations" are of no great importance; that food, sunlight and fresh air are all that are needed. "Out of doors is all — anywhere is good enough." Again the old tendency to see but one thing at a time! But is it true?

Granted that the important factors, as we now know them, in the care of pulmonary tuberculosis are, after control of the patient and his living, food, fresh air, sunshine, an outdoor life — are these latter helps the same everywhere? By no means, and even the brief comparison of the winter just made must prove that some

places offer more opportunity to the invalid to live comfortably out of doors than do others.

Leaving, for the present, wholly out of question any especial advantage of high elevation upon the patient or his disease, — taking only the elements of the weather as just discussed, — is there no choice? If the patient is to have the closest control, the most nutritious food in the greatest abundance, the most carefully regulated exercise and a constant life in the open air, ought he not to be given the greatest opportunity to lead that life? Fresh air is fresh air; sunlight is sunlight. The air in Buffalo, for instance, was probably just as fresh as in Denver and the same sun illumed it, but was that fresh air as available to the patient? In the one city, out of 152 days, 112 totally cloudy; in the other, 18.

Or could a patient, ordered to keep quiet, spend as many hours out of doors with a mean temperature of 18° in Chicago, as in Denver, where the mean minimum was much of the time higher than the maximum in Chicago?

Climate is not a thing in itself; it is only the conditions of sun and rain and heat and cold and wind prevailing in any place. It is not a treatment for anything, but in a disease in which our weapons are discipline, food and outdoor life, a study of meteorologic conditions will enable us to place the patient where he can obtain the best opportunity for living that outdoor life most constantly and most comfortably.

It is not necessary to press individual comparison further. I have said enough to show that a study of such tables as I have given in this paper will prove that all weather is not the same, that all fresh air is not equally good, and that a location like that of Denver does offer, by the conditions of its climate, its lack of storm, its absence of cloud, its warmer sunshine, definite advantages for the outdoor life so essential to the welfare of the tubercular invalid.

IMPLANTATIONS OF SILVER FILIGREE FOR CURE OF LARGE VENTRAL HERNIA.

REPORT OF TWO CASES.*

BY H. B. PERRY, M.D., NORTHAMPTON, MASS.

THERE is no operation of reconstruction that the surgeon is called upon to perform that taxes more the resources at hand or promises less as far as restoration of function is concerned than large, ventral hernia of long standing, whether post-operative, congenital or acquired. The principle involved in the two cases I have the honor to detail to this society is an old one, although the technique is of a later period than when silver wire was first used as a buried suture.

In the evolution of suture materials silver wire has always been in evidence. Shede was the first to use it as a buried suture. His method was to include all the structures except the skin as a preventive of subsequent hernia. A new impetus was given the silver wire suture when

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Credé published his discovery of the antiseptic properties of silver. In this country A. M. Phelps of New York was one of the first to use silver wire sutures in closing abdominal wounds, as well as its use in radical cure of hernia. The plan followed by him was to use a single strand, crossing and recrossing, to insure strength and solidity. The cases done by him were not, in the main, successful, owing, no doubt, partly, to faulty asepsis, partly to the impossibility of using a single strand of wire without more or less strangulation of the tissues and, consequently, tissue necrosis. His use of silver wire began in 1892. From this time until 1900, when O. Witzel of Bonn published a report of a series of cases of hernia, giving results of the use of buried silver wire, very little progress was made, and the advance made since then is largely due to improved asepsis. Witzel's plan was to form a weave or network over the hernial opening with a single strand of wire. About the same time that Witzel reported his cases, R. Gopel of Leipsic reported a series of cases wherein a previously prepared silver filigree pad was sewed over the opening in the abdominal wall. This was the first account of the implantation of a silver filigree pad being used to cure large, ventral hernia. His deduction from his cases and claims of superiority for this particular method over that of Witzel's are as follows:

First: The tissues bordering the hernial opening are less exposed to injury and constriction.

Second: The time for operation is reduced.

Third: The meshes with the ready-made wire pad are of equal and regular dimensions, and diastasis, even of small size, less frequently met with.

Fourth: The amount of silver wire left is reduced to a minimum.

In November, 1902, Dr. Willy Myer of New York reported, in the *"Annals of Surgery,"* three cases. In two of his cases previous attempts at repair had been made and were failures. The third case, owing to a large amount of adipose, seemed hopeless, except some means out of the usual line were attempted. His reports of the three cases were eminently satisfactory. The technique, as described by him, is the one employed in the cases to be reported.

It will not be necessary for me to consume time by giving in detail all of the steps of the operation, but to say that it is identical as though autoplasmic repair were to be done, up to the point of closing the hernial opening. From that time the plan of procedure is as follows: The omentum should, if possible, be stitched to the margin of the hernial ring. The sac is cut away, except that sufficient is left to close over without much tension. This is done with a continuous silk suture. The fat is then excavated sufficiently wide to admit the silver wire pad and permit stitching its border to the muscles and fascia. This is done with a continuous silver wire suture of sufficient length to have its

starting and finishing points together, thus reducing the rough points left to the minimum. This completed, the skin and fat is closed over all by interrupted silkworm-gut sutures. The silver pad should be of sufficient size to overlap the margins of the opening from one half to one inch. This plan is permissible only and indicated only in the classes of cases where autoplasmic repair is impossible with any assurance of success, for any or all of the following reasons:

First, the large size of the hernial opening; second, long existing hernia; third, atrophy through pressure and fatty degeneration of the adjacent muscular and fibrous tissues; fourth, and most frequently, previous unsuccessful attempts at autoplasmic repair; and fifth, in fatty abdominal walls.

The following cases are illustrative of two distinct types, the first a post-operative hernia having had an attempt at repair, the second an acquired umbilical hernia of many years' standing.

CASE I. Mrs. A., age fifty-two, occupation housekeeper in a factory boarding-house. In 1890 this woman was operated upon and a large ovarian cyst removed. A year later, as a consequence of vomiting violently after ether to reduce a Colles' fracture, a hernia in the ventral scar developed. A year after that an operation for the cure of the hernia was done, which was unsuccessful, inasmuch as in six months the hernia returned as bad as before. This woman felt after the first trial that a cure was impossible and began a truss and abdominal band existence. In 1896 matters grew worse, and until 1903 she had been a constant sufferer and from 1900 she had never had a day free from pain, many times requiring large doses of morphine to be comfortable. In January, 1903, she was a woman five feet two inches in height, weighed one hundred and ninety pounds, with a fat, pendulous abdomen. The hernia was very large, containing intestine and omentum, and was not reducible. On Jan. 16, 1903, she was operated upon and a silver filigree pad, four by six inches, was stitched snugly to the muscles and fascia, around an opening two inches and a half wide and four inches in its longest dimension. In this case we could not utilize the omentum by fastening it to the margin of the hernial ring, because at this and at previous operations it had been very largely removed. The skin was sutured over the pad by interrupted silkworm gut. In ten days the wound had healed entirely, she was allowed out of bed in three weeks and went home in four.

CASE II. Mrs. B., age forty-three, occupation housewife, had had a hernia for a long time, could not remember when it began, but for the last six years it had given constantly increasing discomfort and pain, until, the 1st of March, 1903, life had become unbearable and the patient sought and accepted anything that offered any chance of relief. This case was first seen the 12th of March, 1903. She was then a woman five feet in height and weighed about two hundred pounds, with a large deposit of adipose over the abdomen. The hernia was a little to the left of the umbilicus and contained mostly omentum and was not reducible. Her operation was done March 20, 1903. The hernial opening was two by two and a half inches, the largest diameter in the direction of the long axis of the body. In this case the omentum was stitched to the margins of the openings with a continuous silk suture, and a silver filigree wire pad, three inches by

four inches, stitched to the muscles and fascia with a continuous silver wire suture. The skin was closed by interrupted silkworm gut with the usual dressings. This patient was out of bed in three weeks and was allowed home in four.

In each case there were indications for this operation; namely, each of long standing, with atrophy and thinning of the muscles and fascia, large hernial openings and, in Case I, previous attempts at repair. These cases have been seen recently and are well. Case I, eighteen months after operation, is, with the assistance of a green Polish girl, caring for a large family. Case II, fifteen months after operation, is doing the housework for herself and husband with comfort, which she had been unable to do for several years before. A close examination of each case shows a firm, solid abdominal wall without suggestion of diastasis. These women claim to experience no discomfort or consciousness of a foreign body in the abdominal wall, and are both enjoying life thoroughly. The question naturally arises, Will they ever experience any trouble, and, if so, why, after more than a year of freedom? The operation is not difficult, and, with strict asepsis, should be successful.

I venture to suggest this operation as a remedial agent worthy of the trial in that class of cases where tissues already existing in the patient cannot be utilized to cure the defect.

Clinical Department.

A CASE OF MALIGNANT ENDOCARDITIS WITH RECOVERY.

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The following case, interesting from the etiology and as bearing upon the disputed question whether cases of this very grave disease ever recover, seems deserving of record.

The patient, a male, single, aged twenty-six, entered the City Hospital April 19, 1904. He had been usually healthy, but had had an attack of gonorrhea, his first, about March 8 of this year. Two weeks later he came down with measles, and two days after he began to sit up. Following this disease, he was taken with sudden and severe pain in the region of the heart, with dyspnea, lasting severely for four hours. There were chills and irregular fever with sweating and cough, which have persisted during the intervening time till his admission to the hospital. Four days before entrance he had pain in his left leg, which rapidly swelled and turned purple; sweating increased.

The physical examination showed a well-developed, but very sick-looking man. Temperature, 102-103; pulse, 160-170; orthopnea. The heart area as shown by percussion was 3 cm. to right and 16 cm. to left of the median line; a thrill, presystolic in time, was felt below the nipple; gallop rhythm; no murmur was heard at the apex, but a short systolic was heard in the fourth space to the left of the sternum. There were limited areas of consolidation in both backs, toward the bases, not involving the whole of either lower lobe. There was marked phlebitis of the left leg throughout its whole extent. The left calf meas-

ured three inches more than its fellow, and the thigh was only a little less swollen. Marked tenderness over the popliteal and femoral veins. Leucocytosis, 16,200.

During the next few days the heart action grew less tumultuous, the murmur became more distinct. Pulmonic second increased; no pericardial friction. The fever ran from 103 to 101, but showed a tendency to lowering of the curve. On April 25, six days after entrance, and about thirty-eight days after the onset of the gonorrhea, blood was taken from the vein at the elbow with antiseptic precautions and was reported by the pathologist of the hospital to show in the culture gonococci. This confirmed the opinion already held that the endocardial trouble was of gonorrheal origin. Soon after this the fever curve reached normal, and after April 28 the temperature never again rose much above the normal line. The phlebitis was distinctly less on April 30.

May 8 he began to sit in a wheel chair. The systolic murmur is still present, as before, but there are no cardiac symptoms, and the heart area is less than before. There is no dyspnea. On May 19 the limits of heart dullness were 2.5 cm. to right and 11 to left of the median line. A white count on May 28 showed 9,400 leucocytes.

In early June the patient was practically well, walking about and having no symptoms. The murmur is still heard, loudest in the second left interspace, less distinctly at the apex. The areas of consolidation in the back, which were considered to be pulmonary infarcts or embolic pneumonia, were nearly resolved.

Of course, the rôle of gonorrhea in the production of some cases of ulcerative endocarditis is now established by numerous post-mortem observations, but I believe few cases have occurred in which pathologists have been able to demonstrate this organism *intra vitam* in the blood current.

Medical Progress.

RECENT PROGRESS IN NEUROLOGY.

BY PHILIP COOMBS KNAPP, A.M., M.D., BOSTON.

PLANTAR REFLEX.

BARNES¹ has examined the plantar reflex in about 2,500 cases, fifty per cent of whom were suffering from organic nervous disease and twenty per cent from "functional" nervous disease. He concludes that in adults an extensor response (Babinski's sign) never occurs in health; it is always indicative of organic disease. The pyramidal system need not be so injured as to show post-mortem lesions. An extensor response may be produced in any condition which greatly raises intracranial pressure, even if that condition does not cause a demonstrable lesion of the pyramidal system. For instance, an extensor response may occur in hydrocephalus, meningitis, cerebral tumor, etc.; in such cases the extensor response usually occurs only in comatose or semi-comatose states. It also occurs in convulsive conditions of organic origin; *e. g.*, in epilepsy, uremia, infantile convulsions, strychnine poisoning, etc. It never occurs in hysteria and allied conditions, unless some organic disease is also present. A flexor

¹ Review of Neurology and Psychiatry, May, 1904.