

present in all cases, can be greatly diminished by early delivery. The purpose of this paper is not to advocate any particular method of delivery, but to emphasize the necessity for *early* delivery in the interest of both mother and child. Certainly a method of delivery, however, which is capable of giving approximately 100% of maternal recoveries when performed early, can be regarded as satisfactory from this standpoint, and if done before the child has suffered through the loss of maternal blood, should give a low infantile mortality as well. Every uterine hemorrhage during the latter half of pregnancy should be immediately investigated, and every patient should not only be instructed to notify her obstetrician at once of any such occurrence, but should also be provided with the names of several other competent men whom she can call if unable to get him.

A thorough vaginal examination, with anesthesia if necessary, should be made to settle the question of diagnosis, and the finger should be passed up through the internal os and swept around its margin, even if the cervix has to be dilated somewhat to accomplish this. The risk of inducing premature labor is in no way comparable with the risk of failure to recognize a placenta prævia.

Furthermore, a routine vaginal examination at the end of the seventh month should result in many cases being discovered before there has been any bleeding whatever. Of course in such an examination it is not justifiable to pass the finger through the internal os unless the feeling of the lower uterine segment is very suggestive of placenta.

CONCLUSIONS.

1. Improvement in the results of the treatment of placenta prævia is to be expected not so much from any particular *method* of delivery as from *early* delivery.
2. The advantages of early delivery are as great for the child as for the mother.
3. Every patient should be instructed and enabled to notify a competent obstetrician at once of any uterine hemorrhage during pregnancy.
4. Any hemorrhage during the second half of pregnancy demands an immediate investigation of the contents of the lower uterine segment.
5. A routine vaginal examination should be made on every patient at the end of the seventh month.
6. In multiparæ, rapid dilatation, followed by version and extraction, offers a safe and satisfactory method for both mother and child.
7. In primiparæ, at the beginning of hemorrhage, while still in good condition, Cesarean section should be the operation of choice.

HOSPITAL NOTES. — Montreal is about to have a hospital to be devoted entirely to the care of advanced cases of tuberculosis. Grace and Western hospitals, Toronto, are to be amalgamated in a short time. A new Western Hospital is to be erected soon, to cost \$150,000. — *Jour. Am. Med. Asso.*

OBSERVATION UPON EXERCISE IN PULMONARY TUBERCULOSIS.*

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THE regulation of exercise is one of the most important, if not the foremost, therapeutic means used in treatment of pulmonary tuberculosis. Some years ago exercise was advised in all cases; later it was avoided almost altogether, and the "rest cure" was the vogue. But like all matters in which there is value in both extremes, to-day the pendulum is now swinging back again from the complete rest, and hovering at a position where we can get the advantages of both rest and exercise. We believe to-day rest is indicated in the active stage of the disease, after which we gradually increase the exercise until the patient is able to do what he has been accustomed to previous to his sickness, retracing the steps if at any time an exacerbation of the disease occurs.

The most practical application of this method is seen now in those institutions where the "working colony" system is being used. The most recent work along this line is that of Paterson and Inman at Frimley, the attempt being made by the latter to control the amount of work by the opsonic index.

The object of these working colonies is three-fold:

First. The patients are brought under careful medical observation to such a physical condition that when they return to work again the change will be so slight that their lungs will not be affected.

Second. Many patients learn a new occupation which they follow after leaving the institution, and which promises to be more conducive to health than their previous employment.

Third. There is a definite economic value to institutions by having the patients do work which will bring in returns. In the Massachusetts State Sanatorium the same thing is in reality being done, only not under such a name, and the work is not as definitely graded and systematized. We put patients first on light work, later on board work (four and one-half hours' work daily), the latter being more or less supervised to see that they get work which will not be too severe. I have advised several patients to change an easy four and one-half hour place for one giving more exercise. I have also refused to allow a patient to work four and one-half hours until he has had the opportunity of trying something easy.

In considering exercise more in detail a point presents itself: whether exercise as ordinarily spoken of and used as a therapeutic means is not of a double nature. It means, first, exercise of the lungs alone; second, exercise of the body as a whole. We have the right to consider exercise of the lungs separately for the reason that we have factors whose effects are limited essentially to the movement of the lungs. Take, for example, a laryngeal patient with excessive coughing, apparently due entirely to the throat disease, whose temperature will almost immediately sub-

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side when the cough is relieved. Also I have found improvement beginning in the lungs shortly after applying a swathe to relieve pleurisy. A number of patients can date their improvement from a pleurisy with effusion, the effusion keeping the lung quiet by a direct pressure. Some men have advised artificially producing a pneumo thorax, thereby affording rest to the diseased lung; also strapping the chest during a spread of the disease, even for a while after activity ceased. Could breathing exercises be of benefit later on? Shall we at *all times* avoid exercise of the lungs themselves? If exercise is advisable, as most of us will agree it is at the proper time, then is the ordinary muscular exercise such as walking and light work sufficient and the most accurate means of controlling the lung exercise?

EXERCISE OF THE BODY.

In general to-day the treatment of tuberculosis, tersely put, is an attempt to bring all organs and their functions into the highest state of perfection, so that by this perfect adjustment the body will be best able to cope with the invading disease, and if not to completely cure it, at least to prevent its spread. When we place a patient in bed, especially for a long period, are we doing the best by allowing the muscles to atrophy, as such atrophy must eventually to a large degree interfere with convalescence by destroying part of one of the largest organs and one only second to the liver in the nitrogenous metabolism?

How seriously weakened are those patients who have been long in bed? Compare them with the same class of febrile patients we often see moderately exercising with benefit. We have employees in the sanatorium who were formerly patients and who often work without ill-effect while having a moderate elevation of temperature. We find some patients who have slight evening temperatures and who often have a return of normal appetite and their general symptoms improved after allowing them more liberty. I have seen more than one patient improved by not doing exactly as advised. The conclusion can only be, in those individual cases exercise was best, and our endeavors must be along lines to discover why it is that we should advise others of the same class of patients to exercise more.

There is another point to consider in exercise. The heat-regulating centers in people afflicted with this disease seem abnormally sensitive. Besides the actual increase in activity of the lung disease as a cause for fever, should we not consider as a potent factor the actual heat produced during exercise by muscular contractions and increased circulation, and even more important the chemical changes which normally are the chief source of body temperature? Certainly some cases offer suggestive evidence in favor of this fact.

Some of the points mentioned are theoretical, some of no apparent importance, but nevertheless it is only by careful consideration of all factors that we draw our conclusions in practically treating our cases. Each must be treated *individually*. What is good for one is not for the other. The

points I have spoken of have been exemplified only in isolated cases. As a general rule it may be stated exercise should be prohibited until practically all activity of disease subsides, watching carefully, however, to prevent an atrophy of the muscles, which may do harm in the end. The increase in exercise should be gradually progressive, being carefully regulated by the temperature, pulse, symptoms and general physical condition of the patient.

Clinical Department.

APPENDECTOMY. RUPTURE OF SMALL BOWEL. RESECTION WITH END-TO-END ANASTOMOSIS.

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THE case in this report has been of great interest to me, and feeling it might prove of interest to others, it gives me pleasure to submit the following history.

J. S., age thirty-one years, married, on Aug. 20, 1908, was brought to my office doubled up with violent abdominal pain, chiefly about the navel. He gave a history of a number of similar attacks in years past. There was tenderness and pain at McBurney's point, and rigidity of the muscles. Morris' test showed distinctly that the inflammation was in the right lower quadrant. He was given morphia, enough to merely ease the pain, and he was sent to St. Joseph's Hospital in a carriage. At the hospital he had a marked chill. An ice bag was applied to the abdomen, and the bowels were opened by an enema. A diagnosis of appendicitis with probably pus infection was made.

Family history. — Mother died at sixty-five years of age of phthisis. Father living and well. One sister died of pneumonia. Four brothers alive and well. Two sisters also living and well. A child of one of his sisters died of phthisis. Grandparents negative. He was a premature child, and weighed only four pounds when he was born.

Physical examination of the patient showed an exceptionally well built and vigorous subject, with normal heart, lungs and kidneys, and no other apparent trouble, but the previous and present abdominal attack of pain. Careful palpation of patient developed pain on pressure over the right side, and an indurated appendix, no tumor being felt. The evening of the day of entrance to the hospital his temperature was a little over 100°, his pulse was in the nineties, his face was decidedly anxious in expression. He was ordered prepared for operation the following morning. The enema of glycerin, turpentine and N. S. solution had so thoroughly cleansed his bowels on the previous evening that no further injections were given. An injection of morphia $\frac{1}{4}$, and atropin 1-150 was given a short time before etherizing. He was sent to the operating room in the morning at 9 o'clock.

Operation. — The abdomen was opened, Dr. D. Pool assisting, by a straight horizontal incision three inches in length (Boeckmann's incision). The inner end of this incision terminates at a little beyond the outer border of the rectus, the center being at a point which marks the center of the triangle formed by the umbilicus, the anterior superior spine and the pubes. It is nearly on a line drawn between the two anterior superior spines. This incision was chosen as it usually