Am J Obs Dis Women & Child 1908 V-58

THE MOBILITY OF THE PATIENT AFTER LAPAROTOMY.[1]

BY

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MUCH has been written and more has been said about the governing principles and the technic of abdominal surgery in all its bearings; but it is my purpose to speak of one feature of postoperative laparotomy— that of the mobility of the patient; and that will embrace both passive and voluntary exercise. At the best the patient unavoidably suffers more or less annoyance and pain succeeding the operation, continuing a longer or shorter period according to the circumstances of the individual case, and this fact imposes on the operator an obligation to minimize the suffering.

In the early period of abdominal surgery, great attention was paid to the physical quiet of the patient, and rigid measures were adopted to ensure immobility, both active and passive, as essential to the best result. Longer experience has demonstrated the needlessness and injury of such extreme restriction. Then and, too often, now no latitude was given to the inclinations of the patient; but rigid immobility was ruthlessly enforced.

[1] Read at the twenty-first Annual Meeting of the American Association of Obstetricians and Gynecologists, at Baltimore, September 22-24, 1908.

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After the operation the patient was placed flat on the back, the hands kept under the blankets, the head lowered to the level of the body, and the legs were maintained fully extended. This was a refined species of cruelty, needless and injurious, and only equalled by Treves's deadly thirst considered as essential to the highest chances of recovery after abdominal section.

Such directions, and many less arbitrary, should find no place in the after-management of laparotomies. The supporting of the head on a pillow is a most gracious relief to the tension of the recti muscles, and such mobility of the trunk and the extremities, active or passive, as will tend to the actual comfort of the patient; particularly the rolling of the patient from side to side, be it never so little, supported with incompressible bolsters under the mattress, together with elevation and support of the knees to relieve abdominal tension, are both reasonable and salutary, when allowed under proper precautions. Such has been my practice for years. But now the reaction has gone dangerously far in the opposite direction, until some surgeons advocate and practise having the patient sit up the day after the operation and walk about the room the succeeding day, allowing the patient to leave the hospital at the end of the week. It is this radical innovation to which I raise a protest; and for reasons which I believe are rational and logical and in keeping with the physiologic and pathologic conditions present.

The cardinal prerequisites for the prompt healing of wounds are perfect coaptation, perfect rest, and freedom from infection; and whatever tends to interfere with such results deserves unqualified condemnation. In intestinal anastomosis, and when intraabdominal suturing is needful, on structures more or less pathologic, voluntary movements of patients must be restricted. The contractility of the recti and transversalis must be diminished by adhesive plaster or the many-tailed bandage. The muscular contraction incited by active or passive motion is not lost or obliterated, but with every degree of mobility of the trunk the healing process may be disturbed.

In the light of experience every operator knows that whether from conditions intrinsic to the case, or from anatomical or accidental causes, hernias from imperfect union too often mar the result of an otherwise satisfactory operation. The time required for healing of the external structures in abdominal sections, must be considered. There is authoritative basis for the statement, that under favorable circumstances the healing of these structures

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by first intention, may be completed in eleven days, but a somewhat longer period is requisite for this process to have acquired its full measure of resistance to muscular contractions, either active or passive.

In view of this fact, it seems remarkable that sound judgment consents to the early mobility of the patient in getting up or out of bed. If healing is delayed from any cause, then the time in which mobility, either partial or complete, should be permitted, would depend on the individual case. Doubtless time will give us more information in the relation to the frequency of imperfect scars and in the development of hernias from these causes. As pertinent to the healing of wounds which involve the peritoneum, the experience and result obtained in hernia operations at the New York Hospital for Ruptured and Crippled is most instructive, and demonstrates how immobility of the parts by the application of plaster or other immovable dressings has yielded results so conservative and satisfactory as to make comment unnecessary.

In the present status of this subject there are two distinct and divergent views, both having distinguished adherents, and both claiming superior advantages. Without going far in analyzing these conflicting views, those who favor their patients sitting up the day after laparotomy and on the morrow to go about the wards of the hospital, have come forward with the allegation that long continued rest in a horizontal position tends to the development of thrombosis, embolism, or phlebitis.

Boldt makes such a statement which is tentatively endorsed by Polk, and quotes the Mayos as confirming by their observation the diminishing percentage of these complications of these patients getting up within a week from the time of operation. The doctrine of Reis is well known in this relation. This is the crux of the whole matter. Does the early getting up of the patient bear a fixed and determinate relation to these complications? Is it a question of the mechanism of circulation or of pathologic change which is responsible for these accidents? If an authoritative answer to this problem is to be found it must be answered by experience and by hystologic and pathologic demonstration.

As regards the matter of experience every operator, with little or much observation, instinctively turns to his individual experience, the influence of which is one of the most precious guides to right deduction and without which he would become an automaton. When one observer compares his own with another's

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experience, some light will shine on the point in dispute and when the combined experience of many is analyzed more valuable deductions may be drawn. In appealing to my own experience, I find I have had but one case of phlebitis following abdominal section. During a much shorter period I have known some operators who have had a discouraging percentage of this complication. A pertinent inquiry forces itself on the attention of every operator, whether these cases of phlebitis are not of infective origin, and that the supine or upright position of the patient can be but a contributing factor in the problem. Such a conclusion appeals to me as probable and altogether logical. It needs no prophetic vision to trace the causative relation which exists between phlebitis and thrombosis eventuating in embolism.

Observers like Noble, Baldy, and others, declare phlebitis is not due to prolonged horizontal position in bed. An eminent pathologist has expressed to me his belief that early getting up after abdominal section enhances the risk of thrombosis and embolism and that the accident of phlebitis is due to infection and not to blood stasis. The risk of the accidents mentioned are by no means the only ones to be encountered. Within the year an operator of standing presented several patients to one of the largest medical societies in Greater New York as demonstrating the safety of allowing patients to sit up the day after the operation and be about the hospital the second or third day. No one questioned the accuracy of his statement, but he did not suggest that a committee of the society be asked to examine these several cases and report on the healing of the abdominal incision, and the strength of the abdominal wall.

No one doubts the prompt union of the abdominal incision with the patient out of bed in certain cases, but that such results warrant the inference, or that routine practice justifies the rule that it is better for the patient to be out of bed before the expiration of a week, lacks demonstration. Doubtless both imperfect abdominal support and too early mobility of the patient are frequent exciting or contributing causes for weak abdominal walls and resulting hernias, which are the opprobria of the surgical art. In proportion as the abdominal muscles are quiescent, other things being equal, will healing be facilitated. Mechanical support of the abdominal wall and freedom from voluntary mobility of the body are the prime factors which influence such restoration of the parts. This becomes more appar-

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ent when we consider other influences which defeat union of the abdominal incision. Apart from voluntary motion, infection at the time of the operation may be unknown to the operator, together with unknowable intrinsic conditions of the structures which retard or prevent primary union. These may not become apparent until after the lapse of several days, and their injurious influence may be much exaggerated by getting the patient in an upright position during such period. Long continued illness apart from ailments for which the operation was necessary, often requires protracted rest in bed.

These rules apply equally to septic cases in which drainage was had through the abdominal incision. Again, unexpected and sudden death from grave complications and suits for damages, the result of assuming the upright position a few days subsequent to the operation, due, it may be, to causes which, wholly or in part, were independent of the disease for which the operation was done, must restrain the conservative operator in pursuing a course, which has in it so much that is fanciful and so little that is practicable. When the physical and pathological rules bearing on these conditions have been properly adjusted, it is confidently believed a middle ground will be found on which all but extremists can stand. In the majority of patients active exercise out of bed may be allowed during the third week after operation; others will make a satisfactory getting up somewhat earlier, while with others a month must elapse. This is a matter of judgment in an individual case. One of the mischievous influences, which has grown out of the new dogma, is reflected in the sentiment of occasional operators who apparently cherish a belief that they are adding to their reputation by reporting that their cases are up and out at the end of a week.

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DISCUSSION.

DR. ALBERT GOLDSPOHN, of Chicago, could not resist the temptation to remark that the principal motive on the part of men who advocate the early getting up of patients after operations was very much the same as that of the grocer when he sold sugar for less than it cost him in a show window. It was something of a novelty, something to attract attention. This kind of notoriety honest and scientific men had better not seek. Advertising in that manner or any other should not be indulged in.

As to the impropriety and utter wrong of inducing these people to get up on the second or third day after laparotomy, there could hardly be any question, if we considered the principles of the healing process, either primary or secondary union,

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or if we considered the minute processes that went on with the ligature, whether it be absorbable or nonabsorbable, and that surgeons operated for things more important even than the getting of union of an abdominal incision and the absence of hernia. A patient was not operated for the purpose of making a show, but there were much more serious things, and if the whole procedure, the surgical risk, the loss of time, the expense was rewarded by the greatest amount of good of actual improvement in health, then the surgeon must wait, not simply until there was perfect union and perfect exercise of all muscular play in the abdominal parieties, not simply because the sutures were holding things together, or because there had been serous union, but until cicatrization was fairly complete, and that certainly was not possible in less than ten days. He thought surgeons had erred in keeping some patients in bed unnecessarily long. But even if they were, how much were they harmed in health, extremities and trunk? What injury had come to their muscular system or osseous frame from lying in bed a few days longer than was actually needed? What happened to these patients when they remained in bed with a fractured limb? Did a long stay in bed take away their strength, their health, or detract in any way from their strength or vitality? He failed to see it. Extremes in either direction were a mistake, and the extremes of stimulating and prodding patients to get out of bed so soon after abdominal operations were advertisements to be avoided.

Dr. Daniel H. Craig, of Boston, referred to postoperative phlebitis and thrombosis, and said that early mobility of a patient after operation certainly had a relationship to the postoperative complications of phlebitis and thrombosis, and he thought early mobility of a patient lessened the liability to those complications. He had established in his own mind what was really a fact, that the old dictum that infection was the cause of postoperative phlebitis and thrombosis was not necessarily true. It might be true in some cases. For a long time there was a middle ground in which all the other surgeons' cases were infectious, while ours were not. He thought some of our cases were infected, and some of the other fellows' were not.

It appeared to him that to lay down any arbitrary time for keeping patients in bed after operation was entirely wrong. If we were going to lay down a rule for the guidance of tyros in the profession, we had better lay down rules to keep patients in bed for a long time. If rules were laid down for the use of competent surgeons, the individual man's judgment in the individual case must be the rule. It was perfectly safe to allow some patients to get up early, while it was unsafe to allow others to do so, and this should be the basis on which the surgeon should work. For months he had allowed certain patients to get out of bed on the third day; others were allowed to get out of bed a day or two later. He had kept some patients in bed twenty-one days, but either rule would have been foolish if

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applied to the other patient. It was not possible to lay down rules. One of the wisest guides, other things being equal, was the patient's inclination. Given a patient without elevation of temperature or acceleration of pulse, good healing of the wound, everything in a satisfactory condition, if that patient felt well enough and expressed an inclination to rise in bed, other things being equal, he would let her get up. If she did not suggest it, he seldom urged it. On the other hand, it was safe to keep her in bed if it was not for too long.

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