

EMBOLISM COMPLICATING ABDOMINAL SECTION.*

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In the *New York Journal of Gynæcology and Obstetrics* for March, 1894, will be found an article by myself on the subject of Phlegmasia Alba Dolens complicating Abdominal Section and Pelvic Surgery. Since writing that article my attention has been fixed more or less constantly upon this complication, and I have come gradually to look upon it as one of great consequence—secondary only to septic peritonitis and hæmorrhage in importance. It seems to me that abdominal surgeons have paid too little attention to this phase of the operation and have not appreciated the condition at its true worth.

In opening the above-mentioned paper I said: "This peculiar condition has been noticed quite frequently during the past year in my surgical practice, and although at no time has it proved dangerous, still it has invariably delayed the convalescence, and has shown itself to be an extremely painful and annoying affection." Since that time I have been forced to alter my opinion as regards the danger, and believe to-day that I can trace the death of at least three women to this cause. Of this, however, I will give you the opportunity to judge for yourselves. Certain it is that this condition has been responsible for a tedious and painful convalescence to at least a dozen or fifteen of my patients during the past few years, and in at least one case has left the woman (now almost two years since the operation) with a permanently painful and lame leg.

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For a description of the condition I can not do better than quote from my former paper: "In puerperal phlegmasia it has been said that 'it occurs for the most part in the second or third week after delivery; is limited to the lower extremity and chiefly to one side, exhibiting to the touch a feeling of numerous irregular prominences under the skin. It is hot, white, and unyielding, and is accompanied sooner or later with febrile excitement. After a few days the heat and hardness and sensibility diminish, and the limb remains œdematous for a longer or shorter period.' This description is a fairly true one of the cases referred to as occurring after laparotomy. The attack begins, as a rule, about or toward the end of the third week after the operation, at a time when the patient is in apparent perfect health and about to leave her bed. The first symptom is the appearance of pain in the hip, followed quickly by swelling of the part. The swelling and pain spread downward rapidly until within twenty-four hours the whole leg is involved. The swelling is excessive and the tissues are hard to the touch, with no evidence of œdema. In a few days the leg becomes less hard and the pain is correspondingly relieved. At no time has any distinct line of redness been observed to follow the veins, although the tenderness is apt to be more noticeable at these points on pressure. The condition has never been accompanied by any septic evidence whatever; in no case has there been even a stitch-hole abscess. All the patients have had an easy and uneventful convalescence up to the period when the attack began. In none of them that can be remembered has the disease for which the operation was performed been a septic one. One leg alone is affected. In this connection it is worthy of note that in one patient from whom the *right* Fallopian tube and ovary had been removed the *left* leg was the one which became crippled. The application of the hand to the affected part conveys the sensation of considerable heat, although after the first day or two the thermometer in the mouth shows no particular rise of temperature. In several instances within the first twenty-four hours the temperature has been found as high as 101°, but has fallen to the neighborhood of 99° during the next day. On the other hand, some cases have shown no rise from the first. The pulse remains correspondingly good, seldom exceeding 80 or 85 beats to the minute. The condition of mental depression has already been noted, but it has appeared to me that this has arisen more in consequence of the anxiety to return home, and the attendant disappointment, than from the disease. The condition lasts from two to three or even four weeks before the last trace of it has disappeared. It almost invariably

confines the patient to bed for two weeks. The pain and swelling leave gradually and about simultaneously."

At the present time, with a further experience, these additional facts may with advantage be added to the above description. Some few cases have developed as early as the second week after operation; in some cases it has been months before the last trace of the affection has vanished, one case, as before noted, having lasted for two years. Some few of the later developments have been in patients upon whom operations had been performed for septic troubles, these cases, however, being limited to two or three. With one single exception, the left leg has been the one affected, this exception occurring in a case of hysterectomy for fibroid tumor of the uterus; on closer examination, the accompanying depression seems to be part of the disease, its presence being so constant.

The cause of this complication has given me much thought, and I believe I have at last arrived at a correct conclusion concerning it. In looking for the explanation, several facts have been constantly forced to my attention.

In the first place, in but rare exceptions has the operation been performed in the presence of a septic disease; in not a single case has sepsis followed the operation, not even a stitch-hole abscess. The inevitable conclusion to be drawn from these facts is that the complication is not a septic one.

Three deaths have occurred in my surgical practice for which no possible explanation can be given excepting that of embolism:

1. A young healthy mulatto girl on whom I performed hysterectomy for fibroid tumor of the uterus. Operation uneventful; convalescence for four weeks perfect in all respects. She was to have returned to her home on the following day and was in apparent perfect health. She walked out of the ward to the closet, laughing and joking with some of her friends. She was heard to fall in the passageway and was dead within ten minutes. A most careful post-mortem examination revealed absolutely no cause for death.

2. A healthy young negress on whom I performed a hysterectomy for fibroid tumor of the womb returned home after a perfectly normal and easy convalescence. Three weeks later, while talking and laughing with some of the members of her family, in what appeared to be a perfect condition of health, she suddenly fell back upon the bed and died in a few minutes. No post-mortem examination was made, as the facts did not come to my attention until after the funeral. As far as it is possible to tell by a physical examination during life,

the woman did not have an atom of disease other than the fibroid tumor.

3. A white woman upon whom I had performed a hysterectomy had in every way normal convalescence for three weeks. While still in bed, and without any warning whatever, she suddenly became paralyzed, and gradually sank and died in the course of three or four days. A most searching post-mortem examination failed to reveal the cause of death.

A fourth case occurred in the practice of a friend. A pelvic operation had been performed the character of which I do not recall. The patient returned home and a few weeks later felt a sudden pain in one of her arms, followed by swelling, gangrene of the whole arm, and death in consequence.

All things considered, what could have been the cause of death in these four women? I ask, Is it unreasonable to assume that the cause was embolism? It may be asked, Why could not this have been demonstrated at the post-mortem examination? and to that question I could only reply, Have any of you ever tried to find the lesion in a case of embolism of the brain?

Granting these deaths to have been due to embolism, is it far to seek for the cause of the leg lesions, which are, fortunately, the more common? Embolism is, to my mind, the explanation of the existence of this whole group of cases.

If we be correct in this supposition, it seems to me that a valuable hint is furnished us in the line of treatment in pelvic operations which our friends performing vaginal hysterectomies have failed to appreciate—namely, a prolonged rest in bed following the operation, the longer the better.

The complication does not follow any particular lesion or operation. It has been noted in patients who had been suffering from fibroid tumors of the uterus, ovarian cysts, cystic ovaries, pyosalpinx, retrodisplacements, prolapse, and general peritonitis. It has followed such operations as hysterectomy, ovariectomy (single and double), and hysterorrhaphy.

The trouble comes when least expected, and, as far as I can see, there is not much we can do to prevent it. Early rising from bed must certainly tend to increase a patient's risks, and this adds one more reason to the many already existing why a patient should keep quiet and in a recumbent position as long as possible following an abdominal section. Treatment when once a clot has been carried into the brain is apparently useless; the patient dies almost instantly.

Should the clot pass into the circulation of the leg and become lodged in one of the smaller vessels, the patient may usually make up her mind to a few days of pain and swelling in the affected limb, with a gradual subsidence and return to the natural conditions. Absolute rest in bed, elevation of the leg, applications of lead water and laudanum, with possibly an occasional hypodermic of morphine for the purpose of tiding over the acute suffering for a day or two, are the indications. It will be unnecessary to recommend a low diet, as the patient will refuse to eat. Stimulants and massage should be withheld. The condition is one which Nature must relieve, and the less done, excepting to relieve the pain, the better.
