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ON THE CAUSE OF SUDDEN DEATH IN PARTURIENT WOMEN.

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IN the recent volume of transactions, published by the Obstetrical Society of London (Vol. I., page 214), may be found a short article on this subject, illustrated by two cases. In one, a *post-mortem* examination was made, and a firm clot was found in the heart and pulmonary artery. The other case was similar in its symptoms, but no examination having been made, no verification of the cause was obtained. The reporter, Dr. Draper Mackinder, states that no satisfactory conclusion has been arrived at, with respect to the nature of the affection; and that, upon communicating with Prof. Simpson, he received no additional information, the latter being then engaged in investigating the subject.

That these cases should have made a deep impression upon the reporter's mind, is not to be wondered at when we consider the facts. Two mothers, who had survived the ordinary dangers of childbirth long enough to apparently place them beyond the reach of complications arising therefrom, were, with scarcely a moment's warning, stricken down by death. Instances of like nature have doubtless occurred to many of the readers of this JOURNAL, and reports of cases, in which the same train of symptoms has occurred, have been made to the writer, but with no satisfactory explanation of the cause. Believing that the principle upon which the avoidance of such accidents is based, is sound, and from a conviction that the subject is one of the very first importance in the treatment of women subsequent to labor, the following article has been prepared, with the hope that by a dissemination of the knowledge of the *cause* of this most untoward result, its occurrence may be prevented. Prof. Meigs, of Philadelphia, has borne the amplest testimony on this point in his treatise on obstetrics, in which, under

the term *Heart-clot*, he has treated of the effect of the parturient hæmorrhage in producing the condition, which, to so great an extent, predisposes the patient to this affection. ("Obstetrics; the Science and the Art." Philadelphia, 1852. P. 348 *et seq.*)

The effect of depletion in any way, by general or local bleeding, to increase the crassamentum of the blood, and its disposition to coagulate, is well known. The mere amount of blood lost is no measure of this aptitude, for some constitutions will resist its effects, to a degree greatly exceeding that which others can endure. This fact every obstetrician is fully cognizant of. The longer the hæmorrhage goes on, the greater also becomes the liability to it, so that either by the quantity lost, the length of time the flow lasts, or by the peculiarity of the individual case, every woman in childbirth becomes more or less obnoxious to its effects.

Fainting is caused by the diminished tension of the vessels in the sensorium, and loss of blood, by inducing this condition, brings it on. "But—and this is the danger—if she faint badly while her blood is become thin and highly coagulable from hæmorrhage, the scarcely moving current partially stops in the heart, and when she comes out of the deliquium, she sometimes does so with a *clot* in the auricle and ventricle—she has got a false polypus in the heart—and she will surely die." This is Prof. Meigs's way of stating the case, and it is pregnant with meaning to every one who assumes the charge of the lying-in room.

What are the conditions? A woman is taken in labor—hæmorrhage to a greater or less extent goes on through its course, and at last produces all the effects of a slow draining of the vessels—symptoms of lassitude, faintness and disturbance of the circulation. These vary in every case, but of the general fact of their presence there is no doubt. The blood that remains in the system has been brought, by this cause, to a degree of coagulability that needs only a temporary stop to its flow through the vessels to precipitate it into a clot. Anything, which brings on this cessation of the heart's action, will be sufficient to produce it. But of all, nothing is so likely to induce it as raising the patient into an upright posture, not necessarily on the feet, but to such an extent that the vessels of the brain lose their tension, by the gravitation of the blood to a lower part of the body. With this loss of nervous power at the centre of vitality, the action of the heart stops enough to complete the mischief, and the deed is done. For the sake of more definitely fixing the diagnosis of this affection, the following cases, taken from Prof. Meigs, are here appended.

"A lady was confined, and with a natural labor, giving birth to a healthy child at term. She had lost a good deal of blood with the expulsion of the placenta, which left her weak and pallid. The physician directed her to be kept quiet, so that she had a good day and following night. On the following morning the physician found her in all respects as well as could be wished. Very soon after he had withdrawn from her chamber, she became alarmingly ill, and he was sent for and returned, having been absent about one hour. The pulse was now extremely

frequent, weak, and small, and it continued so until her death, which took place on the eighteenth or nineteenth day. It was upon the eighteenth day that I was invited to the consultation, and at once formed the opinion that she had a heart-clot as the cause of all her dreadful symptoms, and which, acting as a tampon of the heart, deranged the circulation, respiration, and innervations of the dying lady. After her decease, which occurred the next morning, a white, fibrinous coagulum was found in the right auricle, nearly filling it and projecting through the tricuspid valve into the right ventricle, the tail of the clot whipped into cords by the threshing action of the chordæ tendinæ of the ventricle. The pleura of the right cavity contained a large quantity of serum.

“When the physician left his patient’s chamber on the morning of the attack, she was well enough; when he returned, after an absence of only one hour, he found her alarmingly ill. She had lost blood in the labor. He had no sooner gone than the nurse took her up, and sat her upon a vessel in bed to pass the urine. She fainted; the blood coagulated in her heart. She did not die outright, but carried on an imperfect circulation outside of the clot, and betwixt it and the walls of the heart. The red matter of the blood was gradually squeezed out from the clot and hurried into the pulmonary artery, together with numerous fragments of the remaining mass of immovable fibrine. Such concrete elements of the blood could not possibly pass through the pulmonic capillaries; whence there arose pulmonary obstructions, pneumonia, pleuritis, and hydrothorax, as the last consequences of the heart-clot. So she died about the nineteenth day.

“Towards the end of the year 1848, a primipara gave birth to her child. She was a tall, slender, and very delicate woman. The placenta was not removed. She lost a good deal of blood; probably a large quantity. Between forty and fifty hours after the birth of the child, I was called in, and removed the placenta from the grasp of the cervix, which alone detained it. It was so putrid that the stench of it could not be removed from my hand, by any means that I could employ, for full twenty-four hours. She was pale, and her pulse was somewhat frequent, but not enough so to annoy me. The next day I found her *comfortable*; the milk had come, and she was doing well, though very pale. On the seventh day, she was put into a chair and set before the fire. Immediately she fell sick, was put to bed very ill, and I being hastily called, told her friends that she had formed a heart-clot, because she had been imprudently taken out of bed, set up, and thus made to faint. In that fainting fit the blood lost the vital induction, and coagulated as it died. She died, as any woman may be expected to do who is so treated, under such circumstances of debility and exhaustion.”

How important, then, that the period succeeding labor, should be watched with the utmost vigilance—so as to prevent those *performances* which nurses, and patients themselves even, often insist on, against the most direct and positive commands of the attending physician—restraints which they attribute to dogmatism and old bettysism, and which it seems to be, in many cases, a mark of good sense and heroism to infringe. Heroism, indeed! but at what a risk!

The calls of nature press—discomfort, from foul linen and bed-clothes, induces a desire for more comfortable appliances—ignorance of the condition of the system, a desire to be considered more *smart* than her friends, or various reasons, prompt the patient to a change of position. She may not suffer, for, by good fortune, her temperament may be one that is not easily affected by the circumstances of her position, and she may escape. But no one can predict this immunity, and wise precaution is none the less needful, on account of the exceptions which may occur. No fixed time can be determined, after which the danger of this complication is past, for this reason—that it is impossible to exactly measure

the effect of the hæmorrhage, in any given case, without subjecting the patient to the test—the very thing of all others to be avoided.

The recumbent position, therefore, should be insisted on for such a length of time as will enable the system to recover from the shock of the hæmorrhage resulting from the labor; till we are satisfied by the concomitant symptoms that no danger will result from assuming any desired position. And in this connection, it may be well to consider whether a longer oversight than is generally given to patients in childbed, is not called for by the exigencies of the situation. There may be no need of active medication, but the continued visits of the medical attendant will at least impress on the mind of the patient a necessity for greater caution than if she was left to her own guidance, and that of the nurse—oftentimes the source of much mischief, by routine habits, and ignorant, wrong-headed notions of treatment.

From the connection in which the article noticed comes to us, as one of the printed transactions of a Society numbering amongst its members some of the most eminent obstetricians of the British empire, and from the nature of Prof. Simpson's answer to Dr. Mackinder's inquiry, it is fair to infer that but little is there known, definitely, concerning it, and that the author of the paper is not alone in his want of information regarding its history and cause. It is upon this very point that Prof. Meigs's work will be found to answer every need. The practitioner will there find the whole subject amply and clearly set forth, and with a degree of detail that leaves little to be desired. It is with both pride and pleasure that we point to him as an American authority, and have at this length endeavored to bring the subject before the profession more prominently than it has been heretofore, with the belief that, under Providence, it needs only an appreciative knowledge of the cause of this fatal result, so much to be dreaded, to avoid its occurrence.