

PARESIS OF THE GUT AFTER ABDOMINAL SURGERY.

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A not uncommon cause of death in abdominal surgery is paralysis of the gut, brought about by injury to its coats, by adhesions, by volvulus or intussusception, yet, frequently, are its symptoms so insidious in their approach, and the effects are so rapid in their development, that death is imminent almost before one can determine to subject the patient to a secondary operation, in that either the symptoms are unequal in their gravity to the effect they imply, or that valuable time is lost in the surgeon's hope to have milder means bring about the desired relief.

A close study of the symptoms in the couple of cases which have died under my observation, indicates that the cause of death must be sought in the reflex action of the bowel upon the heart, that the latter bears a constantly increasing shock which it progressively fails to withstand, and the heart muscle gradually becomes exhausted. And we must deduce from this circumstance that the only relief for this condition lies in removing the cause; it is idle to seek any benefit by trying to overcome the shock or sustain the heart's power.

If the cause persists the effect will also, and if this argument be correct, we must still further deduce the lesson that, when we find the heart acting in the manner peculiar to shock, I might say secondary shock or that which may be established subsequently to the reaction after operation, even though we may fail to appreciate the other usually earlier symptoms, viz., eructations and vomiting, we should unhesitatingly open the abdominal cavity and seek out the point at which the interference with the bowels' nor-

mal action exists; feeling entirely confident that, at any rate, we precipitate nothing, and full of hope that we may save a life.

The following case will exemplify the rapid invasion and the inevitable fatal termination of such cases when not interfered with, or left too long:

Mrs. C., aged sixty-one, admitted to Hospital November 13, 1896. Carcinoma uteri, general health has been failing for last ten months, appetite poor, vomits sometimes, has lost much flesh and strength.

Operation November 18th. Vaginal hysterectomy. Clamps left *in situ*. Patient was returned to bed in good condition. Temperature had been, on 15th, up to 101.4; on 17th, to 101, but day of operation it was down to 99, and after the operation it was only 99.4; on the 19th it was dropping, and reached 98.4, except in afternoon it touched over 99.4; from then on it dropped again; on the 21st, 98; 22d, 97.7—P. M., 98; 23d, 99 in the morning, 98 in the afternoon; from then on, however, it rose in a few hours, until on the 24th it was 102.2, and as she died it reached 102.4.

The pulse shows a certain even march with the temperature before the operation, that is, 95 on the 15th, when temperature was 101.2, and 98 on the 17th, when temperature was 101; from then on, however, it is rising gradually while temperature is falling, so that on the 19th, when the latter reached 98.6, the former is reaching above 110; it stays down to 105 on the 20th, when the temperature reaches 99.4, and on the 21st mounts to 120, while the temperature drops to 98. It remains at 120 while the temperature becomes subnormal, but jumps up on the 23d to 133, when the temperature rises again to 98. Finally, however, it runs up as death approaches, being at 140 for a time when the temperature reached 102°.

On the evening of the 19th (first day after operation) an enema of mag. sulph., tinct. asafoetida and saline solution o i, was given; it returned with a faint trace of fæces.

On the morning of the 20th patient vomited a small amount of peptonized milk; towards the middle of the day she vomited a little separately, but as the clamp had been removed that morning, no special importance was attached to the circumstance. Later in the day and on the morning of the next day (the 21st), she retained all of the peptonized milk. On that day at noon

calomel was begun, one-half grain every half hour for six doses, to be followed in two hours by one drachm of magnes. sulph. every hour until bowels shall move, and soap suds enema when the bowels incline to move. There was a small result at 6 P. M. Some more magnes. sulph. was given in the evening, and then we had it rejected several times; an enema was given, but without any result. A rectal tube was passed, still no good result. Patient retained her food all this time, but still at midday she vomited some dark brown fluid, quite a quantity, and it had somewhat of an odor of fecal matter. Then again, within half an hour, a rectal tube was passed and a large amount of gas escaped. Two hours later an enema was given; a small action followed, and more gas was expelled. Here, at noon, was our most critical moment, and the most important warning given to interfere quickly and resolutely, but the next succession of events which, in fact, were delusive and misleading, seemed to warrant the delay which proved fatal. The pulse was gradually weakening, the patient's vitality was becoming exhausted. It would appear that, even though the symptoms had positively pointed to an obstruction, there was at this moment a clearing sufficient for gas to pass, and I hoped that we might build on this little promise. For this purpose I advised castor-oil, an ounce in two doses, and by its aid and an enema of ox gall, asafætida and soap suds, we even obtained an action, and more gas was expelled. This was effected when temperature was only 98, but pulse was 132. This was followed by loose stools and even involuntary actions shortly before death.

Post-mortem examination made by small incision in median line of abdomen showed a portion (about three inches in length) of sigmoid flexure adherent over the site of operation, top of vagina. It was quite readily detached by drawing upon it through the abdominal opening—no other point of the intestine could be found to have been the seat of any trouble. The peritoneal cavity was absolutely clean.

It may appear that there can be a confusion of symptoms, and that those above cited very closely resemble the succession of events in acute sepsis; but it will be noticed that some are positively distinct from the latter, and that others belonging to acute sepsis are entirely wanting. Of the former, the reflex disturbance of the stomach, eructations at first, followed by vomiting, at the

outset of material ingested, water, milk or brandy, subsequently mucus and blood, finally, possibly, stercoraceous matter; then the failure of the bowel to act in expelling flatus and the inability to secure any effect upon the bowel by laxatives or purgatives, the localized tympanites, being established on the proximal side of the interference with the gut; lastly, the comparatively slight impression made on the temperature, considering the gravity of the other symptoms, and the clear skin.

Of those symptoms belonging to acute sepsis which we fail to find here are the (usually) characteristic tongue, the sweating skin with sallow complexion, the clouded mind, and, as just said, the markedly rising temperature keeping pace with the onward march of the exhausting symptoms. In both, the heart acts in about the same way, gradually weakening and increasing in rapidity as dissolution comes nearer and nearer.

Unfortunately, it is not always in our power to meet such an emergency, to overcome the conditions of gut paralysis, but the writer believes that, in many a case, imminent death may be averted by going directly to a spot where such trouble is centered. Of course, if we have a case of general peritonitis, it will prove rather a hopeless task and a trying ordeal to the patient, to go in among a mass of adherent intestines and try to undo the coils from among the fresh exudation of lymph. The shock of such a procedure would, in all probability, merely serve to hasten the impending death. But if we have, as, for instance, in the case of vaginal hysterectomy (No. 6), an exposed surface of gut right within reach which we may fairly assume is the seat of trouble, there can be but little doubt that it can be displaced from its adhesions, either by the sterilized finger within the opening at the vault of the vagina, or by making an opening above the pubes with all aseptic precautions, and drawing the intestine through the fingers until we determine that the part adherent is free, or that we can locate it and go down to separate it from its attachment.

In the same way, if we have evidence of general peritonitis, and have a localized pain, increasing tympanites and the reflex symptoms mentioned, we should make a secondary operation for the relief of the presumed condition just as readily as we would do in any case presenting such symptoms from the outset. I believe that it is the habitual masking of the symptoms which has

prevented this course being followed, as a rule, when such instances present themselves; but a close interpretation of the value of each symptom will, I think, encourage surgeons to act more promptly than they have been willing to do hitherto.