

JAUNDICE FOLLOWING ABDOMINAL SECTION.

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It is not so much the intention of the writer to offer in this brief essay anything which will enlighten the members of the Association, as it is his hope that he may obtain from some of them an explanation of what has for some time been a mystery to him.

The fact that jaundice follows abdominal section so frequently is, to my mind, proof that the operation in some mysterious way causes this condition. I know of no text-book on gynecology or abdominal surgery that mentions this sequel, nor do I find it mentioned in the TRANSACTIONS of this Association or of the American Gynecological Society. To be sure, it may be mentioned, but I am not aware that it is. Two or three years ago it occurred in my practice more frequently than at present. For a time 8 per cent. or more of my cases of abdominal section were followed, in from two to four months, by quite severe attacks of jaundice. Not only has it occurred in cases that I have operated upon, but I have seen it in patients of other operators, although I am unable to state the percentage in their cases.

Jaundice may follow abdominal section regardless of the condition for which the operation was done. It has occurred after the removal of one tube or ovary, both tubes or ovaries, an ovarian cyst, complete hysterectomy for fibroids, uterine cancer, and after appendectomy. It has developed after the most severe, complicated, and prolonged operations, or after those of the easiest and simplest character; after a lengthy and tedious convalescence, or after a recovery in which the symptoms were so mild and the disturbance so slight that the patient could hardly realize the necessity of remaining in bed. It has occurred after the use of every kind of suture material, but more frequently, in my practice, after the

use of silk for ligating the pedicle. Very often it has appeared when there was suppuration and the formation of a sinus due to the infection of the pedicle ligature. It has not always occurred when a sinus existed, neither have all the cases followed the use of the silk ligature, but it has been at least twice as frequent after the use of silk as it has after using catgut. Neither the difficulty of the operation nor the kind of suture or ligature material used, has appeared to affect the severity of the attack or to influence in any manner the course of the disease.

Allow me to mention three of my cases, they being typical of the others.

CASE I.—Mrs. A., aged thirty-six years; born in the United States; large, muscular, well-developed woman; married fourteen years; three children, oldest twelve years, youngest six years; labors normal. Always in good health until three years ago, when she began to complain of pelvic symptoms, and upon examination she was thought to have pus-tubes on both sides. An operation was performed a few days later, when the diagnosis was found to be correct. The adhesions of the distended tubes to the adjacent viscera were quite extensive and firm, but fortunately were broken without rupturing the tubes. Silk was used to tie the pedicles and the abdomen was closed with silkworm-gut, each suture including the whole thickness of the abdominal wall. Patient's recovery was uneventful, and she left the hospital in three weeks after the operation, feeling well. A short time after leaving a small abscess appeared, and I concluded that the silk around one of the pedicles had become infected. A sinus formed and continued to discharge a little pus for about two months, when one day I saw the end of a thread, and upon removing it found that it was the ligature around one of the pedicles. The sinus soon healed, but about two months later she had an attack of jaundice, with the usual symptoms of this condition well marked. It was nearly six weeks before the yellow discoloration had entirely disappeared. Since then she has been in perfect health, now eight months. She had never before had jaundice or any other disease of the liver.

CASE II.—Mrs. L., aged forty-four years; born in the United States; married twenty-three years; one child, twenty-two years old; no miscarriages. Had suffered from pelvic symptoms several

years, and about fourteen months before I had removed the tubes and ovaries. Operation not difficult, recovery normal, and patient felt well for the following six months, when she began to complain of severe pain in the left iliac region, with tenderness over the uterus. She wished her uterus removed, and on August 10, 1899, I did an abdominal hysterectomy. The uterus was somewhat larger than normal and had not atrophied since the removal of the tubes. On the left side, where she had the pain, there were quite extensive and firm adhesions of the large intestine to the stump of the broad ligament. The adhesions were separated with considerable difficulty, but without injury to the bowel. In this case catgut was used throughout, except one silkworm-gut to bring the skin together. Recovery was uneventful, and in three and one-half weeks after the operation the patient left the hospital for her home, which was several miles distant. Her health was good until six months later, when she had a well-marked attack of jaundice, with the usual symptoms, including the mental depression. She recovered entirely in about four weeks and has been in perfect health since. In this case there was marked tenderness over the liver, but not much, if any, enlargement. She had never had any hepatic trouble before.

CASE III.—Mrs. B., aged thirty-two years; married at twenty; one child, ten years old; widow eight years. Operation on October 30, 1899. Uterus curetted, perineum and cervix repaired, and both tubes and ovaries removed. Operation comparatively easy. Chromicized catgut used to close cervix and perineum, silk in the abdominal cavity, and through-and-through silkworm-gut sutures to close the abdominal walls.

Recovery was rather more protracted than in the other cases, but for two or three days the temperature was nearly 101° F., probably due to a stitch abscess, which healed in a short time. Patient left the hospital four weeks after the operation, remained at home three weeks, and then, contrary to my advice, went back to her former situation, that of cook in a large private family. She continued in good health for three months, when I was called to see her and found well-defined jaundice, with distinct tenderness over the liver and some enlargement of this organ. This was the most severe and pronounced case of the three in every respect, and especially in the mental depression. It was nearly eight weeks

before the patient recovered, but since then she has had excellent health and has worked hard all summer.

I might enumerate other cases, but I think the foregoing are sufficient. What causes the condition I cannot positively say. I can only surmise. If jaundice occurred only in my own cases it might be thought that my asepsis and technique were at fault. I am as careful in these respects as I possibly can be, and this sequel occurs in the practice of other operators perhaps as frequently as it does in mine. I certainly was as careful and took as much pains with the three cases mentioned as with any in which jaundice did not follow the operation. If the condition were due to sepsis, why should it not occur earlier, and why should there not be other septic symptoms? As no case of postoperative jaundice has terminated fatally there has been no opportunity to investigate the cause by an autopsy.

In some of the cases in which silk was used no sinus formed, and there was no indication of the slightest sepsis whatever, while in some of those where a sinus had formed it had been healed for some time before the appearance of the jaundice. Neither did jaundice follow in all cases where there had been a sinus. Perhaps it would be well to state in parentheses that the silk was sterilized by boiling just before operation and the catgut by formalin.

Be as careful as we may, there is no doubt that we carry into the abdominal cavity, in all cases of section, more or less foreign matter that is not absolutely sterile. If we introduce much and the patient's resistance be slight she dies in a few days; but if there be but little and the resistance greater, then may it not be that the little blood-clots, the injured or detached particles of fat or mesentery, or the exudate thrown out around the ligatures or sutures within the abdomen—especially the two latter—in time become infected and break down, and that this débris is carried through the circulation into the liver and causes the jaundice? Sometimes this condition manifests itself in a few days, but it is usually three to four months in developing—surely a long time for the incubation of a septic process.

Yet, if this be the true explanation, there are many cases in which we would expect jaundice to occur that it does not, the operation not having been as cleanly or the abdomen made as free from clots and débris as we could wish, owing to the diseased condition

of the parts ; while in other cases where the operation has been more cleanly, and apparently no foreign matter has been left in the abdominal cavity, jaundice does not occur. Perhaps in one case the resistance of the patient is much greater than in the other.

If the theory advanced—that of septic infection—be not correct, pray what is the explanation ?

Mr. President and Fellows, I leave the question with you to decide whether or not the view presented be the true explanation. I believe it is, yet I am willing to accept any other explanation that is more plausible.