ing the above-mentioned time there have been over fifty major amputations performed in which torsion was used for the control of hemorrhage. In all of these cases the patients never lost any blood from twisted arteries—not even from the femoral artery. We can, therefore, safely recommend torsion as an excellent means of controlling hemorrhage, and now we resort to torsion altogether, as it has given the most gratifying results in the control of hemorrhage.

Commendations like the above could be secured from every hospital in Western Pennsylvania.

The advantages of torsion as compared with ligation are:

1. The greater facility with which it can be applied.

I am fully aware that this proposition is disputed, but to those who are familiar with both methods there can be no doubt that torsion is the easier of the two. For the ligation of an artery an assistant is required to seize the vessel and draw it out while the ligature is applied. For torsion, the surgeon requires no assistant. The vessel must be seized by the forceps in either case. In torsion it only requires three or four turns of the forceps to complete the process, which can be accomplished in as many seconds. When a ligature is applied, let the operator be ever so skillful, the thread may break or slip off the vessel; but if neither of these accidents occur, the process can not be accomplished in anything like the same time.

2. Torsion is a safer method, being less liable to be followed by secondary hemorrhage.

This proposition has been absolutely proven by the experience in the use of torsion at Guy's Hospital, London, and I have now given additional proof by the experience given in this paper.

3. Healing is facilitated because the wound is free from any irritating or foreign body.

This proposition is so plain that it should not require an argument. It was true before the antiseptic treatment of wounds had come into such general use, but is doubly so now. The catgut ligature is, no doubt, a safer ligature than the silk, for it does not require an ulcerative process for its discharge, and when this ligature has been made thoroughly antiseptic it is, no doubt, the best. But a ligature rendered thoroughly antiseptic is not always at hand; and those surgeons who have had the most experience with the antiseptic treatment of wounds will, I think, be the first to admit that, in spite of their most careful attention, septic germs are often introduced into the wounds by means of the ligature. Even after every precaution in preparation and preservation, the handling of a ligature in its application is a frequent source of infection. But there are other objections to its use. The catgut ligature may dissolve before the artery has become closed by the natural hemostatic process, or it may unbind. Both of these accidents have been the frequent cause of secondary hemorrhage.

Being a frequent visitor at the principal metropolitan hospitals, both in our own country and in Europe, I am familiar with the practice of our most skillful surgeons. It is exceedingly annoying for me to witness a thread break or slip off an artery, which often happens in the effort to tie it, when I know that the vessel could be so easily twisted while it was in the grasp of the forceps. When I have asked many of our distinguished surgeons why they do not resort to the torsion, the reply is always the same: *we are afraid to trust it.*

This answer might have been given with equal force by Richard Wiseman in the seventeenth century, had he been asked why he did not resort to the ligature instead of the hot iron.

In a matter so important as the arrest of arterial hemorrhage, it is proper that surgeons should be conservative, but there is such a thing as pushing conservatism too far. In the torsion of arteries I claim we have an improvement upon ligation; its claims for recognition rest upon physiologic arguments which can not be shaken, and its reliability as a hemostatic has been proven by abundant experience.

CLINICAL NOTES.

A CASE OF GENERAL PERITONITIS CAUSED BY AN ENTEROLITH.

WITH A NECROPSY.

BY E. GRISWOLD, M.D.

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J. W., a strong, well built man weighing about one hundred and eighty pounds and 35 years old, had la grippe in the winter of 1891. He had been troubled for several years before with piles, but was seldom disabled entirely by them. By occupation he was a heater in a rolling mill. He never seemed to recover fully from the influenza; was troubled with frequent attacks of griping pains in the abdomen, and seldom had a good appetite. Later, these attacks sometimes became so severe, while at his work, that he was obliged to leave his furnace and lie down for a while. From this time onward he was obliged to employ a helper who could attend to his furnace during these attacks. Not long afterward he began to suffer severe griping and tenesmus at his stools. These distressing symptoms increased until they became so severe that he was afraid to be alone at stools, and was in the habit of having his wife or some one else with him. His stools were not abnormally frequent; nor did the pains connected with them seem to be modified by the condition of his piles. The pains centered, and radiated from, a point just below the umbilicus, and often affected the bladder. Notwithstanding the severity of his sufferings, at these times he would take a few minutes for reaction and rest, and then go to his work. He continued to do this until the conflagration which ended his life came.

On Monday morning, Aug. 6, 1893, about four o'clock, I saw him with his attending physician, Dr. J. H. Reed, and learned that he had been attacked with chills and violent abdominal pains about 7 A.M. on the day before. Dr. Reed did not see him until 3 P.M., when he found his suffering was intense, the pain centering largely near and below the umbilicus, followed toward the next morning, at the time of my visit, with pains down the right spermatic cord and retraction of the testicle, suggesting the possible presence of renal calculi. The temperature was 102 degrees; pulse 120; anorexia and nausea. The bowels had been loose the day before the attack. A careful examination led to the conclusion that there was general peritonitis. There was tumescence, tympanites, tenderness and partial rigidity of the abdominal muscles, with dorsal decubitus. The history of the case did not point to appendicitis, typhlitis or cecitis. Treatment, alterative doses of calomel, with

opium *pro re nata* and external applications of heat. The next day the pain, fever and nausea were slightly diminished, but the pulse was more frequent and weaker. There was progressive failure of the vital forces which, with a diminution of pain and increased frequency and weakness of the pulse, continued until death, which took place on Thursday at 2 P.M., a little more than four days from the attack. The bowels were slightly moved by enemata on the third day.

Necropsy.—An incision extending from the xiphoid cartilage to the symphysis pubis, revealed peritonitis involving all in sight. The vessels of the omentum were ingested so as to produce deep discoloration, and the entire visible peritoneum was involved. There were but trifling adhesions of the intestinal coils or of the omental folds, and this organ covered the intestines in its normal way. There was a small quantity of pus in the dorsal grooves each side of the spine, behind the intestines and mesentery. Upon searching for the caput coli and appendix it was found that there was no evidence of further inflammation about the cecum or any part of the colon or mesocolon than at other parts. There was simply peritonitis; no adhesions, no effusions, no infiltrations, no abscess. On raising the ileum from its dependent position, the cecal end of the appendix was brought into view. It was of normal size and less discolored than the surrounding peritoneum. It was attached to the anterior inner aspect of the caput coli and took a direction toward the median line of the body, with a slight upward trend. Following it with the fingers, it was soon seen to show signs of inflammation and to be attached to the ileum, which was here much thickened and discolored. On loosening it from its attachment to the ileum, its end was found to be bulbous in shape and of the size of a black walnut. This bulbous end was also adherent to the abdominal wall, just above the promontory of the sacrum. Having loosened it from its attachment, it was found to have been lying on the ureter of that side, and that the portion of the peritoneum covering the psoas magnus, and neighboring areas, was ulcerated and bathed in pus. The appendix was cut off close to the cecum and preserved. While examining the ulcerated area of the peritoneum and handling the coils of the ileum, a calculus was found. Its size was a little less than that of a filbert, its shape spheroidal, its surface irregular but without facets, and of a fawn color; the color much resembling that of biliary calculi. It was undoubtedly an enterolith. Searching for its place of escape from the intestinal canal, the bulbous end of the appendix was found to have a hole in it of sufficient size for its escape, and a cavity large enough to hold it. As the cecal end of the appendix was not enlarged, and there being no evidence of recent irritation or inflammation in that part of it, the conclusion seemed to be irresistible that the calculus was an old resident in the distal end, and that the inflammatory process and enlargement of the part containing the calculus had been the cause of the paroxysmal abdominal pains, and of the tenesmus and nauseating symptoms experienced at stool for some time before rupture and the onset of general peritonitis.

The literature of appendicitis, its concomitants and sequelæ, has been so copious of late that nothing less than an anomalous case would seem to invite a report. But the frequency of cases of peritonitis

and appendicitis in my practice of late, has led me to think that the light should be turned on whenever practicable. On making the diagnosis in this case, recovery was thought possible, though not probable. There was no satisfactory evidence that the case was caused by appendicitis, the malposition and adhesion of the appendix being of impossible determination. A celiotomy not later than the first day might have saved the patient if the calculus had been found and removed, but the finding and removal would have been more a matter of accident than of operative skill. The only symptoms of calculus, as already stated, pointed to the kidney. I regard this case as anomalous in the following particulars:

1. The presence of a calculus in the distal end of the appendix, adhesions to the ileum and ureter with a nearly normal condition of the cecal end.

2. The symptoms of renal calculus were caused, no doubt, by the adhesion of the sacculated or bulbous end of the appendix to the peritoneum over the track of the ureter, as well as the inflamed and ulcerated condition of that membrane.

AN IDIOSYNCRASY.

BY JAMES HARVEY RAYMOND, M.D.

CHICAGO.

"A peculiarity of constitution in which one person is affected by an agent, which in numerous others would produce no effect."

It is not an uncommon occurrence in the practice of a physician to meet with a case wherein the judicious administration of a known harmless drug has produced alarming symptoms, and occasionally a case is seen in which unusual and unexpected effects are produced by different foods or even odors. This condition is known as "idiosyncrasy," and it is, at present, beyond the power of the physician to point out definitely a pathologic condition that may be considered a true etiologic factor. The best hypothesis yet offered is, that it is an exalted *reflex act*. I was told by Professor Walter S. Haines, of a clergyman in an eastern city, who, being the unhappy possessor of this peculiarity, was forced to request friends with whom he would dine, to allow no raw apples to be put upon the table else he succumb to the ill effect of their odor, which effect was a most distressing illness. Professor Haines also mentioned this peculiarity in a near friend who was the victim of the odor of the tuberose.

However numerous this class of cases may be, I am sure they are not met with every day, and it is for this reason that I am pleased to bring before the notice of the younger members of the profession a few interesting facts concerning the effects observed in a case following the administration of 5 grains of Dover's powder, the formula of which is:

R Ipecac gr. ss.
Pulv. opii gr. ss.
Sacch. lac. gr. 4.

Considering the physiologic action of the above we find the opium contains about twenty alkaloids, the most common of which are, morphin, codein, narceina, papaverina, narcotina, meconin, apomorphia, thebain and cryptopia.

The action of the crude drug and its various preparations is: Analgesic hypnotic, diaphoretic, antispasmodic and narcotic. The alkaloids, with the exception of the last two named, thebain and cryp-