traversing the sac. Eventually it loses its natural peristaltic movement and lies in the sac as a passive curved tube moderately constricted at its passage through the muscular wall of the abdomen; through this tube the intestinal contents must be forced by the normal action of the bowel within the abdominal cavity. The first symptom of serious trouble in these cases is that of obstinate and gradually increasing constipation, terminating in intestinal obstruction with all of its accompanying symptoms. It is usually in the last-named state that the physician sees it for the first time. He is very likely to recognize the site of the hernia as the point of obstruction. It is only in cases of extreme delay that perforation occurs in this class. In fact, the operator may find a condition of extreme engorgement only, and is surprised after doing a careful operation that the patient eventually dies. The cause of death is usually intestinal paralysis, both from the crippled condition of the bowel in its long residence outside of the body, and from the moderate degree of pressure which has been constantly across the neck of the loop. Attention is especially drawn to this group because of their essentially fatal character. They are, in many instances, fatal where the bowel is not perforated, and they are almost necessarily so if ulceration or gangrene occurs. Doubtless, if we could recognize these with certainty, and where it could be carried out with any degree of skill, resection of the entire loop would be in the interest of the patient.

It seems to the speaker important to recognize the three modes of strangulation briefly referred to, as having a direct bearing upon our prognosis as well as treatment of the damaged bowel, and that we should carefully weigh all of the circumstances attending the onset of the trouble, rather than be governed wholly by the appearance of the bowel as found upon operation.

As an illustration of this point, two cases within personal experience may be cited, one in a woman of eighty years with acute strangulation for only six hours, where the bowel was so badly discolored as to make the policy of its return at first doubtful. She recovered promptly after methods of treatment mentioned later. Another woman of only forty-five with obscure symptoms of intestinal obstruction for ten days, was found to have a loop of bowel moderately congested and mechanically obstructed by sharp flexion upon itself, having slipped through an opening in adherent omentum. The bowel had no appearance of serious damage, and still the woman died ten days later from returning obstruction due to paralysis of the loop which had been incarcerated.

There is no arbitrary classification that will apply to these cases, but for convenience we may speak of them as cases where upon opening the sac we find one of the following conditions :—

1. Congestion.
2. Inflammation.
3. Laceration and perforation.
4. Gangrene.

Congestion.—In cutting down upon strangulated bowel we may find it œdematous, its coats thereby thickened, and of a bluish or deep red, or even dark brown color. The first question for consideration after cutting the stricture which has caused the trouble, is whether or not the bowel may be returned to the abdomen, without risk of subsequent perforation. If the strangulation is of recent origin, and no great violence has been resorted to in attempts at manual reduction, then, though the appearance of the bowel is rather suspicious, we can usually so far improve its condition as to make its return perfectly safe.

From a fairly large personal experience in its use I am a strong advocate of the persistent application of hot water in the restoration of doubtful bowel. First of all be sure that the constriction has been freely divided, and the bowel has been drawn down far enough, so that the portion which has been under pressure can be inspected. Accidents of perforation after the return of the bowel are largely due, the speaker believes, to lack of this precaution. Sterilized gauze (not bi-chloride) or a towel wrung out of water that has been boiled, and at a temperature that can be borne without discomfort to the hands, should be laid upon the parts and changed as often as necessary to retain an elevated temperature until a return toward normal color indicates improved circulation. I have seen some striking illustrations of the efficacy of this method, and believe that the time spent in carrying it out does not add to the risk of the operation; on the contrary, that application of heat to the bowel tends to diminish the amount of shock frequently attendant upon strangulated hernia.