

BRYANT ON INTERNAL INTESTINAL STRANGULATION AND OBSTRUCTION.¹

On retiring from the chair of the Harveian Society in January last, Mr. Bryant made some practical remarks on the treatment of internal intestinal strangulation and obstruction. Considering the subject from a clinical standpoint, he divided his cases into three main groups. 1. Cases of what he considers to be wrongly called acute obstruction; 2. Cases of chronic colonic or rectal obstruction and of acute symptoms grafted upon the chronic; 3. Cases which can not well be placed in either of the two former groups, and the nature of which is obscure.

With regard to the *first group*, the speaker had on a previous occasion called attention to the expediency of separating cases of acute intestinal strangulation from those of obstruction, since in the former obstruction is only one of the symptoms, but neither the cause of danger nor of death, whereas in the latter class of cases obstruction is the prominent and dangerous feature, and from it, or it chiefly, the consecutive changes which lead to death are brought about. The pathological changes undergone in all varieties of intestinal strangulation are identical; in all there is a more or less sudden or complete interference with the venous circulation of the part and this, if not relieved, will of necessity end in complete blood-stasis, and as a consequence, "static gangrene" and death of the part strangulated; death under these circumstances taking place from these pathological causes and not from obstruction. Obstruction may however persist for days or weeks after all the symptoms of acute strangulation have subsided without giving rise to a single bad symptom.

In the presence then of a case of acute strangulation—whether it be due to an internal hernia, volvulus, strangulation by a band or acute intussusception—the venous congestion gradual or rapid of the strang

¹An Address on the Treatment of Internal Intestinal Strangulation and Obstruction. By THOMAS BRYANT, F.R.C.S., (London). London Lancet, Jan. 17, 1891.

ulated part, passing on to a more or less rapid complete blood stasis, should be remembered, together with the probable consequent death of the strangulated bowel if not of the patient; for it encourages the prompt adoption of operative measures and the rejection of temporization.

If a patient, presenting the symptoms of acute intestinal strangulation, be the subject of an old hernia, the rule of surgical practice is to explore the hernia, whether it presents the local features of strangulation or not, and if this produces no result, exploration of the abdominal cavity should follow. If no external hernia be found, the exploration should be attempted at once, first, to discover the exact cause of the strangulation and, second, to relieve it. As cases are seen of irreducible hernia in a condition of obstruction as well as of strangulation and as these conditions are indicated by general symptoms which vary only in intensity, so are cases found of internal hernia or its equivalent under precisely similar circumstances, and these different conditions are indicated by different symptoms. There are in both cases, degrees of strangulation; in one case it may be so sudden and complete as in a few hours to bring about blood stasis in the portion of the bowel implicated; and in another the strangulation is more slowly effected, and two or three days may elapse before the strangulated intestine undergoes any serious organic changes; while between these two extremes there are also many degrees.

This variation of degree shows how it is that in the most acute cases, besides the sudden onset of the symptoms, accompanied with vomiting of a persistent and gushing character, early collapse and speedy death occurs; and how it is when the process of strangulation is less complete and more gradual, the general symptoms are less severe, the vomiting less marked and persistent, and the collapse more or less absent until the close of the case. A case of scrotal hernia of the congenital variety in a young man æt. 26 terminated in gangrene of the whole strangulated bowel in twenty-four hours, and a coil of bowel in a young woman about the same age, which had become strangulated by a peritoneal band clipping the coil at the brim of the pelvis, became gangrenous in the same period. In both of these cases

operation proved useless, because undertaken too late relatively to the amount of changes which had taken place in the strangulated tissues. A portion of bowel, acutely strangulated within the abdomen, is no more likely to relieve itself by natural processes than is a strangulated coil in an external hernia; although this may occur in very exceptional cases, a conscientious surgeon would not endanger the result of ultimate operation by delay. For a loop of bowel, when only nipped by a band or partially strangulated like an obstructed hernia, passing on to strangulation, may suffer but little from some hours' delay, or may even find an escape by natural processes when well aided by art.

Continuing the simile, in the most severe cases of acute strangulated hernia, even taxis may be injurious, nothing but operation being proper, while in the more slowly developing cases, taxis is the correct treatment and operative delay not censurable. Similarly in acute internal strangulation, nothing but laparotomy should be entertained; whereas in the cases of slower development a few hours may be spent in verifying diagnosis and in the employment of measures which may tend toward good. There should then be no delay in performing laparotomy as soon as the diagnosis of acute intestinal strangulation is made.

The *second group*, which includes chronic obstruction of the rectum or colon from cancerous, syphilitic, tubercular or simple ulceration, is, as a rule, susceptible of easy diagnosis. The digital discovery of growth or ulceration when the disease is low down, and the ballooning of the rectum, when it is higher up, together with the history of the case and other symptoms, afford ample evidence; and when the diagnosis has been made the line of treatment is simple and certain, consisting of the use of laxatives to ward off symptoms of obstruction, and a well regulated diet, with colotomy—lumbar if possible—as soon at least as the first symptoms of impending blockage appear; and in time to anticipate those further changes in the bowel above the seat of obstruction upon which depends to such an extent the mortality of all cases of obstruction, as well as so many of colotomy. Some difficulties in diagnosis may be due to the addition of acute to chronic symptoms, but such cases rarely if ever simulate those of acute strangula-

tion, and under such circumstances some delay for purposes of investigation can generally be sanctioned as long as a line of expectant treatment such as will be considered presently, and which is not calculated to do harm, is steadily pursued.

The diagnosis of the *third group* of cases is somewhat obscured because of the great variety of cases included in it, comprising, for purposes of treatment, cases of the first group in which operative delay is justifiable from doubtful diagnosis, or necessary from want of consent or other cause; cases of the second group in which acute symptoms have been grafted upon the chronic; cases of fæcal impaction of the cæcum or colon; cases due to some local peritonitis, the result of injury or the extension of local inflammation from a pelvic or other organ; cases of chronic intussusception or of early stricture; cases in which the diagnosis of internal strangulation is not sufficiently clear, or of colonic obstruction from stricture sufficiently virulent, and yet in which symptoms of obstruction are markedly present—that is to say, abdominal pain exists in various degrees with more or less abdominal tenderness and distension. Peristalsis may or may not be visible—if very visible it suggests chronicity. Vomiting may be present or persistent, and this is aggravated by food. Constipation more or less complete or prolonged may co-exist, and a repeated examination of the rectum fails to give any evidence of local disease.

Mr. Bryant, in these cases, is opposed to the administration of purgatives and enemata, of steadily increasing power, to the use of the long tube for washing out the large bowel, to the prolonged inversion of the patient and succussion and manipulation of the abdomen under anæsthesia; in cases diagnosed as colonic obstruction from fæcal impaction, purgatives and enemata may possibly be considered right by some, although he does not; in probable cases of organic stricture they are unquestionably wrong. He prefers a routine treatment, consisting of the recumbent posture, with elevation of the pelvis, abstention from all food by the mouth, rectal alimentation, the external use of belladonna and glycerine, and the administration of belladonna and opium to check peristalsis and soothe pain. He reports three typical cases treated by this method, as seen in the accompanying table:

TABLE OF ILLUSTRATIVE CASES OF THE THIRD GROUP.

<i>Name.</i>	<i>Sex.</i>	<i>Age.</i>	<i>Symptoms.</i>	<i>Treatment.</i>	<i>Result.</i>
Mrs. B.	F.	60	After a prolonged tendency to constipation, a distended, tender and tympanitic abdomen showing central coils of gut in a marked manner; frequent vomiting of a bilious character—aggravated by food—and complete constipation for ten days. Pulse feeble. Temperature subnormal. Rectal examination negative. <i>Stricture of large bowel high up suspected in the beginning.</i>	Abdomen covered with a mixture of extract bellad. drachm. i. and glycerine, oz. ij; a nutrient enema, oz. iv, alternating with a nutrient meat suppository every four hours, and drachm. i of warm water by the mouth every half hour.	Relief to pain and all symptoms soon followed; some flatus on fourth day. Some grayish feculent matter on sixth day. After a glycerine enema on the seventh day a moderate stool; feeding by mouth resumed. Cure by fourteenth day.
J. G.	M.	32	Ill four days, constipated for seven. A dose of castor oil three days caused vomiting, followed by straining and passage of blood and mucus from bowels, but no feces. Since then, abdominal pain of paroxysmal character. No lumps could be felt; rectal touch negative. <i>Intussusception suggested by symptoms in the beginning.</i>	Rest in bed. Water, drachm. i. every half hour per os. Nutrient enema alternating with a meat suppository every four hours, the first enema also containing tinct. opii gr. xx. Blood and mucus passed during next twenty-four hours seven times with tenesmus, but no feces. Enemata continued but each containing tinct. opii, gr. xx.	Liquid stool with flatus on fourth day, with relief; same on fifth day. Some solid motion came away, but with a blood clot on the tenth day and in three weeks the abdominal symptoms had disappeared. Probably would have resulted differently under old lines of treatment.
A. B.	F.	19	Some weeks difficulty in obtaining relief from bowels, followed by complete obstruction ending in abdominal pain, distension and tenderness with vomiting. Not even flatus has passed for eleven days. Vomiting persistent. Palpation and rectal touch negative. Temperature normal.	Belladonna application as with Mrs. B. Nutrient enema of egg and milk, oz. iv, alternating with a meat suppository every 3 hours, with drachm. i of fluid per os every half hour to relieve thirst.	Abdomen less tense and painful on second day; vomiting ceased. Still better on fourth day, so a few ounces of thin broth were allowed. Bowels acted on fifth day and continued to do so when an enema was given to clear out the rectum of the solid motion which had passed down, and a rapid recovery ensued.

The results of the treatment illustrated by the cases tabulated were satisfactory and better than any that would have followed the use of powerful purgatives, large enemata or abdominal taxis; moreover, the treatment was simple, and though expectant, it did no harm. It may reasonably be said of such treatment that in the only class of cases to which it is applicable—those of a not urgent but doubtful nature—it gives time for the case to develop and the surgeon to frame a more exact diagnosis; while it leaves nature every chance of correcting, where possible, any error in the abdominal machinery. Should this treatment fail in any case to speedily relieve the symptoms, more active measures may be resorted to as soon as a clearer working diagnosis has been made.

Opium may sometimes be given more freely than in the tabulated cases, but where belladonna applied externally arrests peristalsis and soothes pain, opium is not needed. It is, however, of great value in many cases, and the preferred form is solid opium or the bimeconate of morphia. It should always be given with caution, and preferably with belladonna as a suppository made with gelatine—half a grain of the extract of belladonna and half a grain or more of solid opium. Warm fomentation to a swollen abdomen often gives comfort, and should, when used, be applied over the glycerine and belladonna application—one drachm of extract of belladonna and one ounce of glycerine. Relief has been known to follow the elevation of the pelvis on a firm pillow, so as to allow gravity to act toward the thorax, in a case of obstructed bowel from a supposed band.

Mr. Bryant claims no novelty in the treatment he advances. The principle upon which it is based was first recommended by Sydenham, re-introduced by Brinton and more recently enforced by Thomas, with some modifications; he only desires to emphasize its value in the hope that it may supersede the routine practices, which he condemns and which have too long occupied the field.

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