COLOTOMY IN CANCER OF THE PROSTATE.

Presented to the Section of Surgery at the Annual Meeting of the British Medical Association, held in Dublin, August, 1887.

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It is but seldom that operative interference is called for, or even advocated in primary cancer of the adult prostate. Billroth[1] and Demarquay[2] have both practised ablation of the carcinomatous gland, and with some success; but our diagnostic skill is not as yet sufficiently advanced to enable us to recognise the disease with certainty in its earlier stages, and it is obvious that, in a structure so intimately connected with adjacent parts, and so directly interposed amongst the vascular and lymphatic highways of the pelvis, as the prostate is, removal must be early if it is to prove of permanent benefit.

Again, we are sometimes called upon to alleviate, by cystotomy, that agonising pain, frequency and straining in micturition which is observable in that form of prostatic carcinoma, where the bladder and urethra gradually become involved, and the capsule of the gland remains intact, tense, and resistant.

There is, however, a rarer form of the disease in the adult for which cystotomy is useless. In this class of cases the neoplasm is softer in its type, and more rapid in its growth. The capsule is certain to be invaded early, and to give way easily. The tumour does not only encroach upon the calibre of the rectum—for all prostatic carcinomata do this more or less—but breaks into, and eventually occludes that canal. It finally infringes upon the sacrum, spreads upwards towards the pelvic brim, and downwards towards the anus. In this rarer form of the disease it is the insensitive rectal surface which suffers, and not the intolerant vesico-urethral mucous membrane. Vesical symptoms are, therefore, reduced to a minimum, and pass unnoticed or discounted by the patient. It is the increasing difficulty of evacuating the bowels which forces the patient to apply for relief. Such cases have been reported by Daniel Mollière, Latourilly, and others.[3] The object of this paper is to add to this record, and, at the same time, to advocate the performance of early colotomy as being its true surgical treatment.

Case I.—G. L., aged 53, consulted my friend Dr. Astley Cooper, in April, 1886, complaining of a difficulty he experienced in getting his bowels open, and though rigidly cross-questioned, adhered to the statement that the difficulty came on quite suddenly, and only two or three days previously. On rectal examination, Dr. Cooper found a large prostatic tumour bulging back into the rectum. He brought the case to me with the diagnosis of malignant prostate, and my notes are as follows.

"For fifteen years the patient has suffered from stricture of the urethra, and has been in the habit of keeping the same under control by the occasional passage of a large bougie. He had noticed a rapid loss of flesh these last four months, but has not suffered any pain, nor has he had any symptoms referable to prostatic or vesical disease. There has been no pain, straining, or frequency in micturition. He had never had hæmaturia. There is no syphilitic or alcoholistic history. On rectal examination I find a large, smooth-surfaced, elastic tumour, the size of an orange, springing from the right lobe of the prostate. It is somewhat fixed. The index finger can be passed over its upper limb. The left lobe can be proved to be quite free, and to be normal in size."

Colotomy was advised to anticipate the probable obstruction, and to place the rectum and the encroaching tumour at rest. To this the patient demurred, as he did not feel at all ill, and as he thought the operation far too grave for the degree of obstruction he was then suffering from. A fortnight later I was again asked to see him, as he was suffering pain, and was passing pus and blood *per anum*.

To my surprise I found the prostatic growth to have considerably increased. The index finger could not reach above it. The bowel felt occluded, for the tumour had spread laterally as well as antero-posteriorly. Moreover, in examining its posterior and most projecting surface the finger slipped into a deep and ragged hole, an inch in depth, at which spot the growth had evidently broken down, and was now fungating out into the rectum, or rather the small track that was doing duty for that canal. The urethra was jammed against the pubic arch, the bladder was tilted up, and contained a pint of residual urine, which was, however, easily withdrawn by means of a No. 17 French *coudé* catheter.

Our patient was now in danger of obstruction. He was suffering severely from the constant driblets of liquid diarrhœa into and over the deep fungating crevice, whilst copious and recurrent hæmorrhages were fast reducing his strength. The tumour felt too fixed for ablation, and the patient too weak for so grave an operation. I therefore performed left lumbar colotomy, to his great relief, and he died from exhaustion a short time afterwards.

A *post-mortem* was obtained, and the specimen is now before you.[4] You will notice the enormous growth of the right prostatic lobe; how completely the left lobe has escaped, and how entirely the bladder and urethra are uninvaded. There were no secondary deposits. Microscopically the growth is encephaloid. The entire duration of this patient's symptoms from their onset to his death was six weeks—a period unequalled in the history of prostatic carcinoma.[5]

After a careful consideration of the progress of this case, I was led to believe that colotomy earlier performed would have measurably prolonged the patient's life. It was apparent that the rapid increase in the bulk of the tumour bore some relation to the constant rectal tenesmus, and the rapid demise of the patient to the repeated and profuse rectal hæmorrhages.

It was obvious that the violence of the hæmorrhage depended directly upon the violence of the straining efforts which the patient made to overcome the rectal obstruction, and it was too certain that septic intoxication, set up by the introduction of fæcal matter by means of the crevice into the centre of a very vascular growth, played an important part in the termination of the case. I believe all this might have been prevented by an earlier colotomy.

Whilst awaiting a like case to correct or to confirm this impression, four cases of the harder variety came under my notice, in all of which the vesical tenesmus was relieved by the catheter. At the end of the year, however, the following case came under my care.

J. T., aged 62. For a year and a half the patient had noticed a dull aching pain in the rectum, which was increased by active exercise. Defæcation had always been easy and painless. No other symptom was noticed until seven months ago, when he was suddenly forced to strain to make water. The straining culminated in retention, which was relieved by means of a soft Jacques' catheter, and he subsequently regained complete vesical power. He has never had hæmaturia.

Present Condition.—The patient is hale and well-nourished, his appetite is good. He has now no trouble with his urine, micturating normally thrice daily, with only a slight and transient aching in the urethra after the act. He complains of a bearing down, and a sense of weight in the perineum on standing, this being always relieved by a night's rest. On rectal examination I found a large irregular tumour, semi-fluctuant at its most projecting point, and connected with the left lateral lobe of the prostate. It was of the size of an orange, and bulged backwards considerably into the rectum. Some idea of the size and shape of the growth can be obtained from this clay model which I then made.[6] I explained the case to the patient, told him there was no doubt the growth would shortly obstruct the canal and probably break down and bleed; after which the termination of the case would be rapid. I advised, and he accepted colotomy.

I operated in January, 1887, and he returned to the care of his medical attendant, Dr. Samuel Haigh, of Chipping Norton, who has kindly reported the progress of the case. He writes under date July 6th, 1887. J. T. is fairly well, has improved lately, gets out for short walks, has a good rose colour in lips. His bowels are regulated with cascara sagrada, and the protrusion of the gut is but slight and easily reduced. Rectal examination shows the growth to have quite occluded the rectum and to have flattened itself against the sacrum and coccyx. The finger can distinguish several orange-sized lobulated masses which are smooth, and india-rubber to the feel, with the exception of one spot, where a deep crack is met with, leading into the substance of the tumour. There is a discharge of a tablespoonful of treacly fluid every second or third day.

Case III.—G. J., aged 74, came under the care of Mr. Lockhart Stephens, of Emsworth, in May, 1887, complaining of difficulty and increased frequency of defæcation. There were no bladder symptoms. The prostate was found to be greatly enlarged, so much so that the

1 Billroth, Langenbeck's *Archiv*, Bd. 10, p. 548.
2 Demarquay, De l'Ablation totale de la Prostate (*Gaz. Méd. de Paris*, 1873).
3 There are a few specimens in the London museums. An interesting one is in St. Mary's Hospital Museum, H.H. 42, in which the prostate of a dog has been attacked.
4 This specimen was shown at the Pathological Society, 1886.
5 After eliminating uncertain cases, and those whose insufficiency of detail render them valueless, about eighty cases of primary malignant disease of the prostate can be collected. The sarcomata of youth are the most rapid (see cases by Bree, West, and others). After the age of 21 it will be seen that the duration of symptoms is nearly directly proportionate to the age of the patient.
6 A copy of this model was shown at the Berlin Surgical Congress of 1887, to demonstrate the author's method of making clay models of the prostate gland. A sketch of it will be found in the Journal, May 21st, 1887, p. 1090, Fig. 2.

finger could not get above it. I advised colotomy, but the operation was rejected. Acute intestinal obstruction of only thirty hours' duration terminated the case on May 29th. This case forms a fitting corollary to the preceding two.

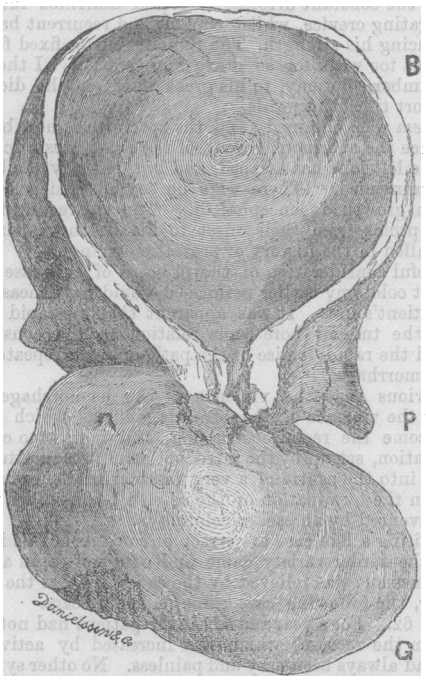

Fig. 1.—Anterior view. The bladder (B) is opened in front. The growth (G) is shown springing from right lobe; the left lobe (P) is free.

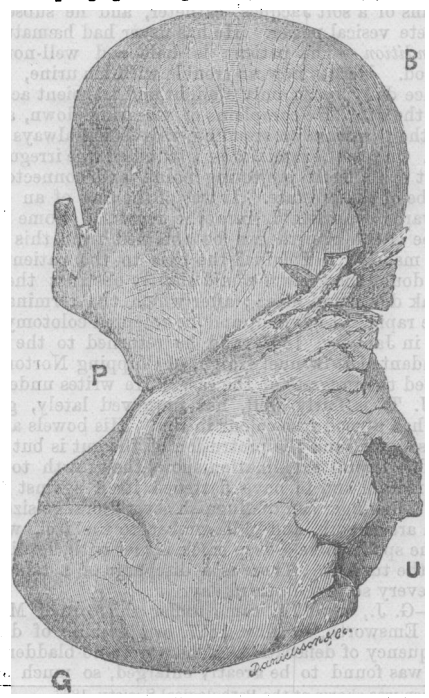

Fig. 2.—Posterior view of bladder (B) showing the ulcerated surface (U) at the lower part of the growth (G). The left lobe (P) is free.

I would submit that these cases, if taken into consideration together, will support the treatment adopted in the first two, as being the true surgery of the disease.

I believe the gain from early colotomy is great. In the first place, we avoid the danger of rectal hæmorrhage—a hæmorrhage which must be increased during the act of straining, for the soft neoplastic mass is squeezed between the Turkish slipper-like grip of the levatores ani embracing it below, and the abdominal pressure acting from above. Secondly, we escape a probable source of septic intoxication or infection arising from the introduction of liquid fæcal matter into cavities of a very vascular growth. Thirdly, we relieve our patient of the pain and distress which a semi-occluded bowel must of necessity produce; and, lastly, I cannot but believe that we *retard* the rate of increase of the tumour by removing all necessity for violent straining. Each violent straining effort which the patient makes to overcome the rectal obstruction must produce a great increase of pelvic venous pressure, and hence a great increase of blood pabulum to the tumour. By colotomy we place the rectum and its contained tumour in a state of almost complete rest, and thus, as we are not able to remove the malignant mass, we withdraw from it that intermittent but appreciable increase in its blood-supply.

INGUINAL COLOTOMY; ITS ADVANTAGES OVER THE LUMBAR OPERATION, WITH SPECIAL REFERENCE TO A METHOD FOR PREVENTING FÆCES PASSING BELOW THE ARTIFICIAL ANUS.

Read in the Section of Surgery, at the Annual Meeting of the British Medical Association held in Dublin, August, 1887.

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After deliberate consideration, and having performed six inguinal colotomies, so many points of interest present themselves to me that I have determined to record my own experience and views upon the subject. The more I watch the results of lumbar colotomy, the more confident I feel that inguinal colotomy is the better operation in the majority of cases, and, I submit, may be performed with greater advantage to the patient.

It seems to be a custom in cases of obstruction involving the rectum or sigmoid flexure, to open the descending colon in the loin without pausing to consider whether the risk and discomfort are increased or diminished by the performance of the operation in the inguinal region.

Now that surgery, through perfect cleanliness, has made such gigantic strides, and the peritoneum is no longer held in awe as in former days, the opening of that serous cavity, if due care be taken, does not to any great extent increase the dangers of the operation, and is certainly not more harmful to the patient than the disturbance of cellular tissue and parts around, so frequently incurred when there is difficulty in finding the bowel in lumbar colotomy.

I propose first to mention the various methods by which inguinal colotomy has been performed, then the way I operate, how in the early operations I in part failed to prevent fæces passing below the artificial opening and in what manner this has been effectually remedied in the latter cases.

Luke commenced the operation by making a perpendicular incision in the groin four inches long, and just outside the course of the epigastric artery. The sigmoid flexure was sought for and pulled into the wound, the gut being opened at once. This method has long ago passed out of use, for there are no advantages to be gained. The opening in the gut may be near the disease, and if the sigmoid flexure has a short meso-colon, there is some difficulty in bringing the intestine to the surface; again, the immediate opening of the gut increases the risk of extravasation of fæces into the peritoneal cavity.

Reeves makes the usual incision used in performing inguinal colotomy, namely, one an inch above Poupart's ligament, extending from just external to the abdominal ring to a little below the anterior superior spine of the ileum, the incision being between three and four inches in length. Sutures are passed through the gut to fasten it to the skin. When making experiments as to where and what incision is the best, I found the above described not so good as one made just internal to the anterior superior spine, as I shall presently show. Putting sutures through the gut must increase the risks of the operation, for gas and sometimes fæces are extravasated through the punctures made by the needle and may make their way into the peritoneal cavity.

Studsgaard performs the operation in the usual way, but taking