A CASE
OF
FIBROUS POLYPOUS TUMOUR OF THE
BLADDER SUCCESSFULLY REMOVED.

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On July 27th, 1881, Mrs. —, was brought to me by Dr. Jeaffreson, of Wandsworth. The patient, æt. 40, had been married for some years and had borne children. She was naturally of a melancholy fretful disposition; this temperament it was supposed might induce her to describe her sufferings as being more acute than others would do.

On January 3rd, 1881, having been previously free from symptoms of urinary derangement, she was seized with rigor and diarrhœa. This was followed in a few days by bloody urine, retention, and cystitis, with urgent, almost constant desire to micturate. For two or three days the urine was mainly withdrawn by catheter. On the 5th and 6th January, the urine so removed was of deep blood colour, and, though the retention passed off, the urine retained its bloody character more or less for a month. During this acute stage of the disorder the pulse was 100 and the temperature 100°—101° F. Besides bloody dis-

coloration, sometimes clots came away in ropy alkaline mucus.

During the latter part of February and March blood was no longer constant in the urine, though decolorised clots and phosphatic concretions were passed from time to time with much pain. The general health became depressed from the irritation of the bladder and broken rest at night.

No catamenia having appeared since January pregnancy was suspected, and on April 8th the uterus was examined and the bladder was sounded. In neither viscus was any condition discovered to explain the hæmaturia and cystitis. On the following day abortion of a three month's foetus took place. The secondaries were retained for eleven days and were then removed by hand. No bad symptoms followed the abortion; nor, contrary to hope, was there any amelioration in the sufferings of the bladder. The urine continued ropy, was passed almost hourly, and every few days portions of clot or of phosphatic grit were expelled.

On June 13th, after a day of great pain, a mass of decolorised fibrine as large as an almond and coated with phosphates was passed. This was followed by considerable relief to the pain and frequency of micturition. The urine became neutral in reaction, nearly clear, and the proportion of albumen greatly diminished. The patient went to Brighton for warm sea baths, and gathered strength sufficient to be able to walk daily with comfort. Still the urine was passed every two hours both by day and night, and contained a little pus. Thus, though much better, she certainly was not well, and on her return to London, Dr. Jeaffreson brought the patient to me for consultation. I sounded the bladder, but the sound revealed no rough grating nor any unusual condition except a tender spot behind and near the neck of the bladder. In this want of precise information, and as the patient had greatly improved since the expulsion of the large phosphatic concretion, it was agreed by Dr. Jeaffreson and

myself that the cause of the cystitis might have been voided, and that the patient should try again the warm sea baths before advising that any more searching examination should be made. This improvement continued for several weeks. Afterwards the irritation returned, but without any repetition of the bleeding, which had been obstinate at the outset of the disorder. In September the patient moved from Eastbourne to St. Leonard's, where, in the beginning of October, her sufferings being very great, she consulted Mr. Penhall. That gentleman injected morphia subcutaneously and with some benefit. But as the irritation was notwithstanding very severe, Mr. Penhall, having received from Dr. Jeaffreson a full history of the rise and duration of the symptoms, dilated the urethra under chloroform, introduced his finger into the bladder, and discovered a firm protuberance encrusted with phosphates, of narrow connection, easily raised from the floor of the bladder and apparently attached to the trigone about two inches from the internal orifice of the urethra, against which it impinged by the apex. This examination caused little bleeding either from the growth itself or from the dilated urethra. The immediate result to the patient was great relief from pain, and the bladder quickly regained the power of retaining urine, temporarily affected by the dilatation. This improvement was not long continued and the urine remained alkaline with a small amount of pus. The patient's condition otherwise was good; she ate well and was in better spirits than before.

On 28th October, after consultation between Dr. Jeaffreson, Mr. Penhall, and myself, the urethra was dilated a second time with the object of removing the growth. The finger passed into the bladder and ascertained that the tumour lay just in the position in which it had been discovered by Mr. Penhall; and with a little difficulty the noose of a wire *écraseur* was slipped over the tumour, tightened round the base, and the tumour removed. Very little bleeding followed the extraction, and the patient's recovery was rapid and devoid of any formidable symptom.

In two days after the operation the urine was strongly acid, though it had been almost constantly alkaline or neutral for months previously.

In seven days after the operation the bladder had considerable control of its contents, and the urine had become free of pus or albumen. In a month after the operation the patient's symptoms had completely left her and she is now in good health.¹

When taken from the bladder the growth was about the size of a small walnut, covered with phosphatic concretions, except at its base where it was almost sessile. It was moderately firm and tolerably smooth on the surface. Separated from it by the process of removal was a small pea-like translucent part, greatly resembling an ordinary polypus of other mucous surfaces. The tumour was handed to Mr. Stanley Boyd for examination, and here follows his report.

REPORT by Mr. STANLEY BOYD, M.B., B.S. Lond., F.R.C.S.,
Surgical Registrar to University College Hospital.

"The tumour handed to me for examination was somewhat shrunk by immersion in strong spirit. It was a roughly spherical mass, flattened from above down, having a short pedicle attached to its under surface, near one border.

"The surface was rendered irregular by low, for the most part rounded, prominences; but each of these was smooth; there were no long papillæ. Here and there was a thin coating of phosphates. The longest diameter of growth was about three-quarters of an inch.

"The growth was firm, and on section presented the appearance of moderately dense, fibrous tissue, which has been hardened in spirit. It was bounded, for the most part, by a grey layer $\frac{1}{32}$ of an inch or less in thickness, which quite conveyed the idea that the mucous membrane was continued over the growth.

¹ Dr. Jeaffreson reports (13th July, 1882) "that the patient is to-day well in every respect; without a trace of her former symptoms."

"The microscopic structure of the tumour is difficult to describe, on account of the varying relations between cells and stroma in different parts of it.

"Beginning with the surface, most of the epithelium, which must originally have covered its surface, has been lost by ulceration or by violence. Here and there a little is found in a deep recess; and it shows all the early stages in the formation of villous processes, being first divided into processes by depressions of all depths like tubular glands; then the processes lengthen, and the subepithelial connective tissue seems to grow into it; and finally a villus of considerable length was found having commencing secondary villi on its sides. It is also worthy of note that the epithelial cells are longer and narrower than those of the bladder, approaching in form those found on ordinary villous tumours.

"The narrow grey band, on most of the surface of the growth, consists of dense fibrous tissue, containing very few nuclei capable of absorbing logwood stain, and infiltrated with fine granules of earthy salts.

"This stratum is pretty sharply bounded by a more or less dense layer of small, round cells, which here and there has quite the appearance of a granulating surface. The fibrous tissue is tolerably loose here, and its fibres are more or less vertical to the surface; but it soon becomes denser, and the interlacing of its bundles gives rise to alveoli which contain masses of round cells. In some places the structure is so like that of a scirrhus that they probably could not be distinguished. The stroma in most parts contains a good many oval nuclei.

"In each section that has been examined there are two large collections of cells, which are subdivided into smaller masses by very delicate processes of connective tissue which form a meshwork. The whole exactly resembles the rarer form of alveolar sarcoma, as represented by Billroth in his 'Pathology.'

"A number of vessels enter the pedicle, and arteries of considerable size, having the usual coats well developed,

are not rare in the body of the tumour; but towards the surface vessels of any size are infrequent. Small points of calcification are common in the fibrous tissue near the surface.

"In the pedicle just above the point of section there are a few bundles of involuntary muscular fibres.

"Had nothing been known of the history of this growth I believe there would have been much difficulty in coming to a conclusion as to its nature. As it is, it seems certain that it is not malignant but that it is probably a firm fibroma. The occurrence of the different structures above described in this one simple tumour—structures which are characteristic of very different types of growth—seems to tell strongly against the possibility of drawing any hard and fast line, based upon microscopical appearances, between these types."

I must here acknowledge my great obligation to Dr. Jeaffreson and to Mr. Penhall for their kindness in supplying me with information in drawing up the report of this case. Dr. Jeaffreson's notes, taken almost daily, have furnished many details that show the unusual course of this case in the early stages. My thanks are due also to Mr. Boyd, whose description of the tumour is more complete than any published before.

Several points of interest are connected with this case. In its clinical history it did not follow the usual course of vesical tumour. First, the remarkable febrile outset. So far as I am aware, a rigor and high temperature have not been the outset of the disorder in any other case. Next retention, often a very troublesome symptom, was in this case of short duration and was not repeated.

Hæmorrhage, again, was copious at first, and long continued, either as clot or discoloured urine, but when it once ceased did not return. Repeated hæmorrhage is the great character of vesical tumour, because the frequent forms are villous or carcinomatous, which bleed freely and repeatedly. Hence copious hæmorrhage is generally a

diagnostic sign of vesical tumour. This particular growth, being fibrous, seldom bleeds copiously and usually only when injured by a catheter or sound. In Mr. Birkett's valuable paper in the forty-first volume of our 'Transactions' the unimportance of the hæmorrhage which attends the growth of fibrous polypus is pointed out as useful in diagnosis.

The chief symptom indicative of tumour was the irritability of the bladder, at times very severe and never completely assuaged. But irritability, even when stone is excluded, is not only due to tumour. In this case the abortive pregnancy, which accompanied the earlier stages of the disease, diverted suspicion, and the very great improvement which followed the extrusion of the mass of decolorised clot and phosphates in June led to the opinion that the cause of hæmorrhage, whatever it might be, had passed away. On the return of the painful micturition in October Mr. Penhall then discovered the real cause of suffering, and to him is due the credit of diagnosing the disease.

Tumours of the bladder are divided into villous, fibrous, epithelial, and carcinomatous. They are well described by Mr. Birkett in the forty-first volume of our 'Transactions,' by Mr. Murray Humphry in the sixty-second volume, and by Mr. Gross in his 'Treatise of Diseases of the Urinary Organs,' 1876. These authors state that fibroma, of which the present case is an example, is very rarely met with, most of the recorded cases being of villous tumour. Gross could collect records of only 15 cases among patients whose ages varied from thirteen months to fifty-six years, and ranging in size from that of a pea to that of the fist. This form was observed seven times in women, in most of which, if not in all the cases, the polypus protruded from the urethra. My case was an exception in this respect, for no protrusion had taken place nor could the growth be detected by the sound and finger in the vagina.

The structure of the tumour is of interest. Mainly

composed of fibrous tissue, at one part it was beginning to form villous processes, while at another it was not distinguishable from alveolar sarcoma.

This observation supports the opinion of those who maintain that any tumour projecting from a mucous surface may become villous. The presence of sarcomatous elements indicates the possibility of the growth taking malignant habit. This possible change from benignancy to malignancy is an additional reason for early extirpation.

The list of successful removals of vesical tumour of any kind is not a large one. To Gross's table of 16 cases of operation with 10 recoveries, there have been added cases by Murray Humphry, Alexander, Bryant, Lawson Tait, Norton, Heim-Vögtlin, Davies Colley, and Marcacci, and lastly my own. Together these make 28 cases with 19 recoveries and 9 deaths. In the larger portion of the recoveries the patients were females, in whom of course the procedure for removal is much easier than in males. In Alexander's case the tumours were multiple, and dilatation of the urethra was performed twice before the patient was cured. In Marcacci's case, a male, the operation was a suprapubic one, and though the patient recovered from the operation he died eventually from septic mischief derived from destruction of the pubic symphysis from urinary infiltration.

References of Authors quoted.

Birkett, 'Med.-Chir. Trans.,' 1858, vol. lxi. Murray Humphry, 'Med.-Chir. Trans.,' 1879, vol. lxii. Gross, 'Diseases of Urinary Organs,' 1876. Alexander, 'Lancet,' 1879, vol. i, p. 84. Bryant, 'Brit. Med. Journ.,' vol i, p. 821. Lawson Tait, 'Diseases of Women.' Norton, 'Clinical Trans.,' 1879, vol. 12, p. 215. Heim-Vögtlin, 'Virchow u. Hirsch Jahresbericht,' for 1880, vol. 2, p. 211. Marcacci, 'Virchow u. Hirsch Jahresbericht' for 1880, vol. 2, p. 211. Davies Colley, 'Brit. Med. Journ.,' 1880, December 25th.