BRITISH MEDICAL JOURNAL.

BEING THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

EDITED FOR THE ASSOCIATION BY ERNEST HART.

LONDON: SATURDAY, JANUARY 7, 1888.

A LECTURE

ON

TUMOURS OF THE BLADDER.

Delivered at University College Hospital, November 21st, 1887.

By SIR HENRY THOMPSON, M.B., F.R.C.S.,

Consulting Surgeon and Professor of Clinical Surgery to the Hospital, etc.

PART I.

AFTER remarking on the extremely narrow limits which this subject occupied a few years ago, compared with that which it has at the present day, the lecturer continued:—With regard to the varieties of tumour which affect the bladder, they are to be classified as in other parts of the body, according to their histological characters, and also to their tendency to invade surrounding structures and reproduce themselves elsewhere.

Until recently, most vesical tumours were supposed to belong to that class of growths roughly indicated as "cancerous." And besides these, a single species was familiarly recognised under the term "villous," although by some this was also relegated to the preceding class, as "villous cancer," without any warrant, however, for doing so. It was well known to be a bleeding tumour, which sooner or later produced a fatal result by its single irrepressible function of continuous blood-letting. This so-called "villous growth" is, in fact, of all varieties that which most commonly affects the bladder, and it will form the most prominent in the series now presented, but under another name—that of papilloma.

First, however, I shall briefly mention as the least complex form of growth springing from the vesical mucous membrane, the simple mucous polypus, that formation of which the well known nasal polypus is the type. It is very rarely found in the bladder, and has at present been only met with in that of the young child. Nothing more will be said of it here.

Secondly, we come to the growth just referred to as papilloma; it is so called because its distinctive structure is that of an outgrowth from the mucous membrane in the form of papillæ, more or less covered with a well defined epithelium, spheroidal or more commonly cylindrical, each papilla being provided with a considerable blood-vessel. The structure, indeed, is normal in its elements, and the arrangement of these is normal also, inasmuch as the papilla is simply a very slender fold or extension of mucous membrane. A section of the mucous coat from an empty healthy bladder, made immediately after death, will furnish the same appearance in every respect. I show you here an admirable section taken from the monkey in the condition named, which, of course, is not attainable with a human subject. It is not distinguishable from papilloma. To return; when these papillæ are long, slender, and filamentous, floating in the urine, springing together in a group from a circumscribed base or stalk, they are termed "fimbriated papilloma." If the organ containing such a growth is examined in air instead of under water, the fimbriæ collapse, adhere, and form a soft, rounded, scarlet mass, which is quite characteristic. Uniting the filaments, especially at the base, there are always some connective tissues interspersed, and mostly some non-striped muscular fibres also. Then sometimes the outgrowth springing from a pedicle expands so as to form a small polypoid mass, much firmer than the nasal variety just alluded to. It may grow to a large size, and whether small or large there may be two or more springing from the same base.

When there is a larger proportion of the fibrous structures named, associated to form the growth, and it is denser in structure than those first described, I have employed the term "fibrous papilloma" to denote it.

Fibrous papilloma thus understood is, of course, related through in-

sensible gradations to the fimbriated variety, although the two are essentially distinct in their nature, since the fimbriated variety may continue increasing in size for years while still retaining its simple structure, and it does not necessarily acquire density with age. A characteristic fibrous papilloma is a growth chiefly solid, and as such may form a considerable mass, with only a small proportion of fimbriated papillæ on its surface. And here let me tell you that these fimbriated papillæ may be found attached to the surface of any vesical tumour, even to some forms of malignant growth, apparently as accidental adjuncts, the true character of the tumour being unaltered thereby. And this is a matter of importance in relation to diagnosis, and obviously indicates the necessity for caution in forecasting the result of operation, since a specimen of papilloma in the urine, while it proves the presence of that growth in the bladder, does not absolutely bar the possibility that a more serious growth may be there also.

Next, occasionally we find a tumour springing generally from a wide base, rounded in form, firm in consistence, not large, although one or two such have been met with, doubtless after a considerable term of growth, the chief constituent of which is organic muscular fibre, such as that which constitutes the contractile coat of the bladder itself. This is termed myoma. It may be more or less intermixed with bands of connective tissue, and it may have fringes of papilloma on the surface, but the distinctive character found on examination determines its classification as a muscular growth.

In carefully examining the foregoing tumours under the microscope, a few examples are met with in which may be observed a large quantity of small nucleated cells interspersed, or grouped among the constituents of the fibrous stroma forming the denser portions of the tumour; and sometimes cells of irregular form, not apparently belonging to any normal type. And such a structure always arouses suspicion that the growth is not so innocent in its tendency as papilloma, and may not improbably be reproduced after removal. It suffices for the present to speak of these as forming an intermediate or transition class, and thus we approach the borders of the next group.

This is that important class of growths the structure of which is largely composed of epithelium in varied or modified forms; and their tendency is to invade and infiltrate by rapid increase, all adjacent structures. Among them, epithelioma may be first named, as it appears not infrequently to affect the bladder, and its course is probably not more rapid there than it is in other parts of the body. Scirrhus is somewhat more rare, and progresses more slowly than the preceding. The more rapidly developed and larger growths formerly grouped as encephaloid, and now defined as round-celled and spindle-celled sarcomata, are certainly rare in the adult; they occasionally affect the prostate and bladder of children who appear not to be subject to the other forms of malignant disease in those organs. Lastly may be named, as the rarest of all, the dermoid tumour, which has been on two or three occasions met with in the bladder.

Now the symptoms of vesical tumour present nothing special at the outset; a little undue frequency of micturition is then commonly the only sign, and excites no suspicion as to the real cause. But early in the progress of papilloma there is an important sign, characteristic of it throughout its entire course, and common to most other tumours at a late period, namely, the appearance of blood in the urine. A single hæmorrhage occurs after exercise, thus resembling that from calculus, hence its presence is often suspected, but with certain differences which you may advantageously note. First, the hæmorrhage from papilloma is generally much more abundant than that of calculus; and secondly it is mostly unaccompanied by pain and irritation of the bladder. As the case advances, hæmorrhage becomes more frequent; pain, however, is still rarely complained of unless obstruction to the outflow of urine is occasioned by clots. Such a history should always arouse great suspicion. The symptoms described have very commonly, until recent time, been attributed to "congestion of the kidney," a rare, if not unknown occurrence, without the presence of other symptoms than those which have been named. And a careful inquiry should be made in order to determine the diagnosis. En-

deavour first to learn whether the patient has ever observed that the act of micturition sometimes commences by passing urine natural in appearance, but becoming stained or mixed with florid blood towards the close. If so, the source is vesical, possibly prostatic, at all events not renal, but is more probably the result of tumour. When blood comes from the kidney, it is almost invariably mixed with the urine, and unless it is very recent indeed, it is brownish, not florid in tint. Occasionally, although very rarely, florid blood may appear first and clear urine afterwards, but the reverse is the almost invariable rule.

Secondly, a microscopic examination of *débris* passed in the urine must be diligently made, and before long the characteristic appearance of papillomatous structure will, if present, generally be discovered. The bladder may be washed out with plain water, especially after an examination by sounding, in order to obtain the evidence in question. For the nature of the structure sought, see Fig. 1, which

Fig. 1.

shows a typical specimen, such as may be often found, and a glance at which enables you to affirm without hesitation, the presence of a papillomatous growth in the passages, and its site may be safely assumed to be the bladder, where the symptoms described are present.¹

But, you may say: Why not sound the bladder, as we do for a stone, and determine the question thus? For this reason, that the question is not thus determinable. The soft, filmy tissues, even when springing from a thick base, cannot be felt floating in a fluid medium, and yield no evidence to the sound. Nor does rectal examination afford a sign unless the bladder is distended by the growth, when the organ feels rounded, but very soft, as if filled with fluid. On the other hand, when there is a cancerous growth involving the bladder to a notable extent, a well-defined mass of irregular outline and of hard, unyielding consistence, almost invariably presents itself to the finger in the bowel. Whenever this is met with, a condition so different from the rounded and yielding mass presented by senile enlargement of the prostate, there need be little doubt as to the very grave fact indicated, namely, the presence of scirrhus occupying the walls of the bladder itself, and therefore irremovable by art. If on this point you are in any doubt, you may with the short beaked sound obtain further evidence by examining the rectum with the finger at the same time when carcinoma in any form may usually be thus detected. Having verified its presence, we make no attempt at removal; nothing can be gained by dealing thus with any portion of such a tumour.

How we are to treat the non-malignant growths will be discussed next.

(To be concluded.)

¹ The portion from which the figure was drawn was, among others, shown under the microscope at the lecture; the epithelium is columnar, and very abundant.

TESTIMONIAL TO DR. BODINGTON.—Dr. Fowler Bodington, formerly President of the Birmingham Medical Institute, of the Midland Medical Society, and of the Birmingham and Midland Counties Branch of the British Medical Association, who is on the eve of leaving for British Columbia, where he intends to begin practice, has been presented with an address, largely signed by the members of the medical profession in Birmingham, expressive of the high regard and esteem in which he has been held for many years by all those who have had professional and social relations with him, of the credit and distinction with which he has filled the various offices, and heartily wishing him full success and prosperity in his new sphere of duty. Among the signatories we observe the names of Sir Walter Foster, M.P., Dr. Wade, Mr. Furseaux Jordan, Mr. Lawson Tait, and Dr. Alfred Carter.

LETTSONIAN LECTURES ON SOME POINTS IN THE SURGERY OF THE URINARY ORGANS.

Delivered before the Medical Society of London, January, 1888.

By REGINALD HARRISON, F.R.C.S.,
Surgeon to the Liverpool Royal Infirmary; and Lecturer on Clinical Surgery in the Victoria University.

LECTURE I.

URINE FEVER AND TOXIC URINE.—THE FORMATION OF STRICTURE
TISSUE IN REFERENCE SPECIALLY TO THE TREATMENT
OF URETHRAL STRICTURE.

MR. PRESIDENT AND FELLOWS,—Let me, in the first place, thank you for permitting me to address your ancient and learned Society in the capacity of Lettsoman Lecturer for the present session. At the same time, and with a full consciousness of my inability to approach you as I would desire, let me also ask your indulgence whilst I attempt to follow in the direction selected by many who, in preceding me in this chair, have so largely contributed to the practical advancement of medicine and surgery.

As I have already indicated, I propose making some observations relative to certain points arising out of the surgery of the urinary organs. It is now some years since my attention was directed to the circumstances under which fever was occasionally seen in connection with various lesions involving the urinary tract. It appeared to me that the subject had scarcely received the attention it deserved, and that a further knowledge of the etiology of what I would speak of as urine fever, as opposed to ordinary wound fever, might be of service to us as practical surgeons.

Let me, for the sake of clearness and comparison, briefly illustrate in a familiar way what I mean, and then I can the more easily deduce the points upon which I desire to lay stress this evening.

In surgical practice we have long been accustomed to recognise, after injuries and operations, a form of excitement which is generally known as wound or traumatic fever. It varies in degree according to circumstances, is generally attended with some elevation of temperature, and it usually declines without proving either serious or fatal. Since the due recognition of these principles upon which Listerism is based, the development of this kind of fever has been considerably restricted, if not entirely abolished.

In striking contrast with this we have a distinctive form of fever, not unlike ague in many important respects, which is alone seen in lesions involving the urinary tract. Let us take, for example, the simple operation of internal urethrotomy. Here an incision, limited to a few lines in length, is made in the urethra, which the patient for some two or three hours is probably unconscious of. Then he is seized with a rigor, which terminates in fever and an elevation of temperature. As a rule, these symptoms decline in the course of a few hours, possibly to be repeated. More rarely the rigor and fever are followed by suppression of urine, convulsions, and speedy death; *post-mortem* examination failing to discover any reasonable or recognised explanation for these phenomena. The symptoms, though, as a rule, in only slight degree, more frequently follow internal urethrotomy, accidental wounds of the urethra, and the introduction of a catheter or a bougie. Even the last mentioned operation, simple as it usually is, has proved fatal in the course of a few hours, with little or nothing to show in explanation. Here then, as I have said before, we have a train of symptoms resembling ague, which are only called into existence in connection with lesions involving the urinary tract. In order that I may be perfectly understood as to the phenomena referred to, let me briefly illustrate the kind of case alluded to by narratives from my own practice.

Some years ago, in a case of extremely tight stricture, I performed an internal urethrotomy on a young and otherwise healthy male; three hours afterwards he had a rigor, followed by high temperature, convulsions, and suppression of urine, and in forty-six hours he was dead. *Post-mortem* examination failed to prove anything except that the operation had been properly performed.

In the course of last year I saw a boy, aged 11 years, who, having ruptured his urethra by a fall, had retention of urine for thirty hours