

CHAPTER XXVII

TUMOURS OF THE BLADDER—VARICOSE VEINS—URACHUS CYST AND FISTULA—VESICO-INTESTINAL FISTULA

TUMOURS

VARIETIES

THE great majority of tumours of the bladder are of epithelial origin. These tumours begin habitually as benign papillomatous growths, but soon undergo malignant (carcinomatous) degeneration. Next in frequency come the connective-tissue growths, fibroma, myxoma, and sarcoma, and the mixed tumours, fibromyxoma and myxosarcoma. Isolated examples of other neoplasms have been recorded, such as leiomyoma,¹ rhabdomyoma,² angioma,³ nævus,⁴ chondroma,³ epithelioma, and adenoma. Epithelial, dermoid, and hydatid cysts have also been observed.

ETIOLOGY

No more is known about the pathogenesis of tumours of the bladder than about that of any other tumours. It has been surmised that a papillary tumour might originate from the hypertrophied formations met with in chronic cystitis, and the rare epithelioma is said to arise from the cornified epithelium (leukoplasia) produced by the same disease. In confirmation of this theory are the reports of Lichtenstein⁵ and Wendel⁶ concerning epithelial tumours resulting from cystitis due to anilin dyes. On the other hand, tumours of the bladder are clinically the cause, not the result, of inflammation.

¹ Terrier and Hartmann, *Revue de chir.*, 1895, xv, 181. Ramsay, *Phila. Med. J.*, 1900, vi, 43, 86.

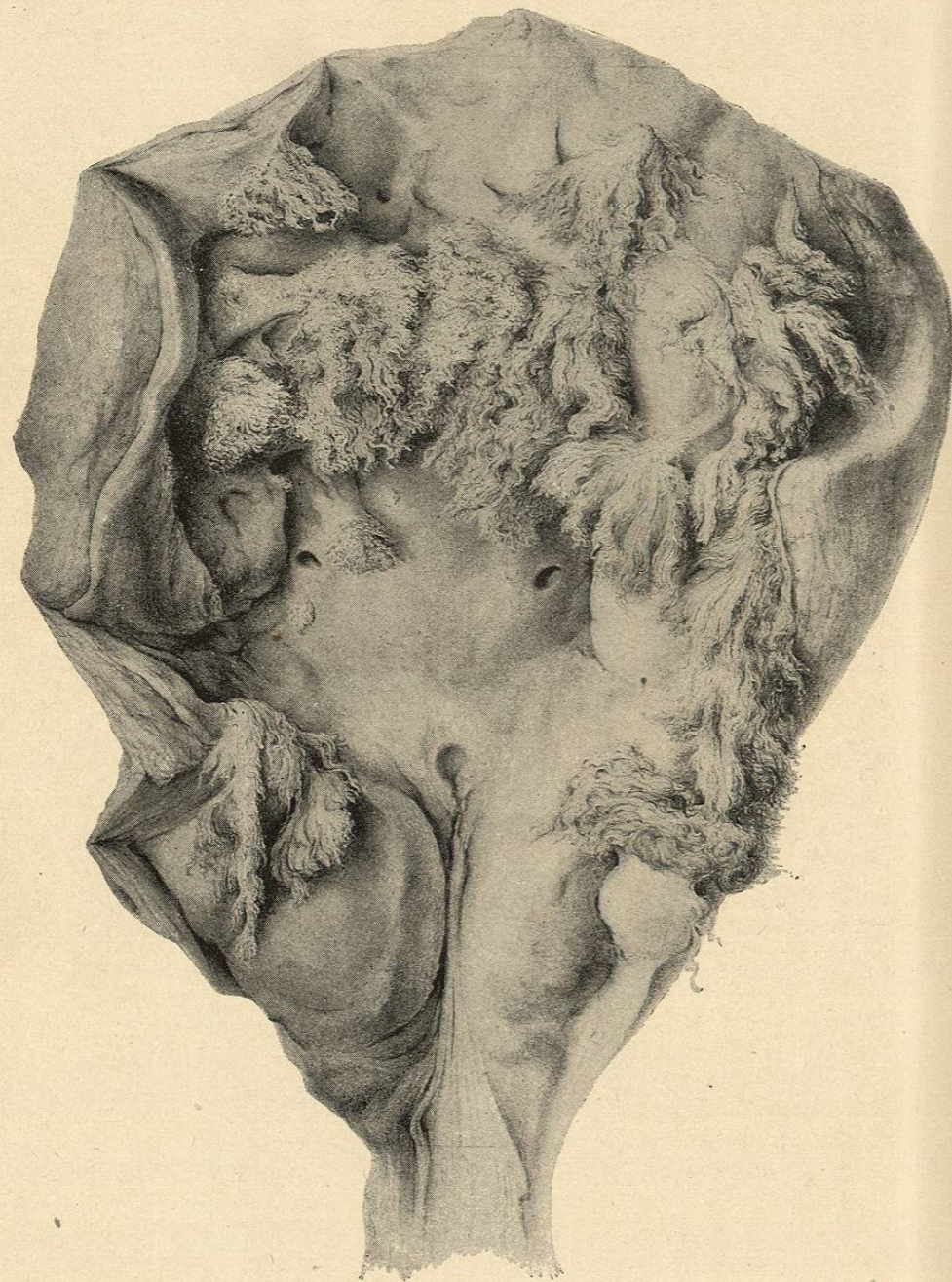
² Livio, *Rivista clinica*, 1887, xxvi, 42. Pavone, *Guyon's Annales*, 1899, xvii, 68.

³ Albarran, *Tumeurs de la vessie*, Paris, 1891. Langhans, *Virchow's Archiv*, 1879, lxxv, 291.

⁴ Arbuthnot Lane, *Brit. Med. J.*, 1895, i, 1093.

⁵ *Deutsche med. Wochenschr.*, 1898, xxiv, 709.

⁶ *J. Amer. Med. Ass'n*, 1900, xxxiv, 1256.



MULTIPLE VILLOUS PAPILOMA OF THE BLADDER.
HISTOLOGICALLY: TRUE BENIGN PAPILOMA (Albarran).

Age and Sex.—Men suffer from tumours of the bladder at least twice, perhaps thrice, as often as women. Of 99 cases of bladder cancer collected by Nason,¹ 78 occurred in men. Tumours have been met with at all ages, but the great preponderance of carcinoma makes the decades between thirty and sixty the most prolific of neoplasms.

Multiplicity.—From 25% (Albarran) to 40% (Fenwick²) of tumours of the bladder are multiple. This multiplicity is due chiefly to the contact inoculation of the epithelial tumours. The growth seems to give rise to secondary deposits in that part of the vesical mucous membrane that comes in contact with it when the bladder is empty.

Situation.—The commonest point of origin for tumours of the bladder is the immediate neighbourhood of the ureteral orifices. They are fairly frequent about the neck of the bladder, but show no special affinity for the remainder of the trigone. A point of great importance in the cystoscopic diagnosis of neoplasms is the fact that the primary tumour is almost always found in the lower half of the bladder. The upper half is involved frequently enough, but only by extension or contact inoculation from the original growth. So rare are primary tumours confined to the upper half that the possibility of their occurrence in that region is commonly overlooked.

MORBID ANATOMY

Epithelial Tumours.—We may overlook the rare epithelioma and adenoma—the latter usually a prostatic growth—to concentrate our attention upon the commonest of all bladder tumours, the papilloma and the carcinoma.

Papilloma (*Villous Tumour, Papillary Fibroma, Fimbriated Papilloma*).—This neoplasm has been gracefully described by Thompson³ as follows:

“The most obvious characteristic of the growth is a structure in which the vesical mucous membrane is developed into fine papillæ, which consist of long fimbriated processes of extreme tenuity, and usually form a group arising from a small circumscribed base (Plate VII). This last-named part contains other and more solid structure than that which enters into the papillæ themselves. Sometimes the processes are almost single, thread-like forms arranged side by side, and undivided for a considerable distance; others are bifid, generally more compound still; some may be described as digitate, and occasionally the processes radiate and suggest forms resembling those of leaves. Immersed in fluid, the long fimbriated growths float out

¹ Brit. Med. J., 1901, i, 1199.

² Lancet, 1888, i, 473.

³ Tumours of the Bladder, London, 1884, p. 57.

like slender-leaved aquatic plants in deep water, and when removed to air collapse and form a soft mass resembling a small strawberry." The villi are composed of capillary loops covered by several layers

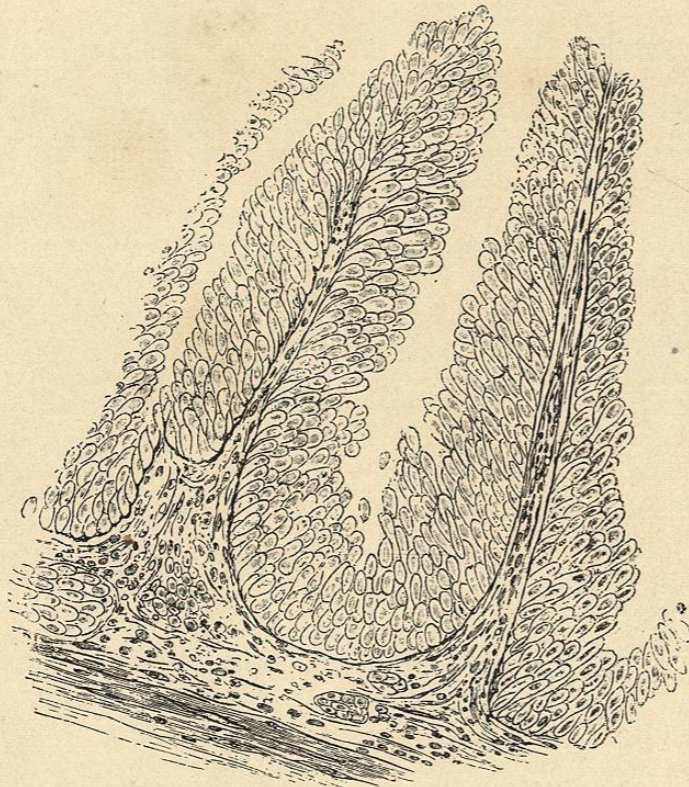
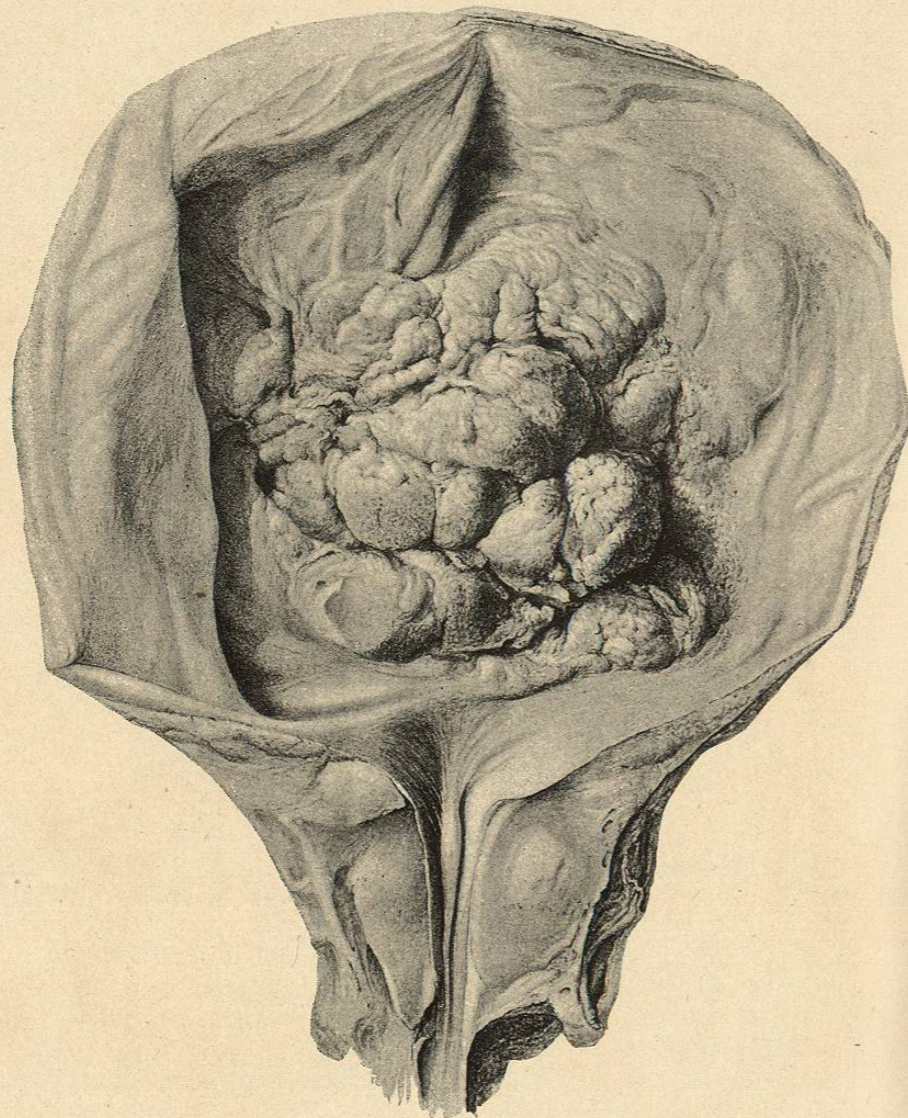


FIG. 94.—FIMBRIATED PAPILOMA, SHOWING TWO OF THE SLENDER PAPILOMATOUS PROCESSES OR SO-CALLED "VILLI" (from Thompson).

of columnar epithelium (Fig. 94). The "more solid structure" of the pedicle contains the muscular, fibrous, and vascular elements of the bladder wall. Exceptionally, independent villi spring from the wall of the bladder itself, or the pedicle is short and broad, giving the growth a sessile appearance.

Carcinoma.—Lobular, alveolar, reticular carcinoma, myo-carcinoma, adeno-carcinoma, and cylindroma have been described (*cf.* Albaran). Without entering into the minute pathology of these varieties we may be satisfied to divide carcinomata into 3 clinical types: 1. Primary carcinoma. 2. Degenerated papilloma. 3. Secondary carcinoma. Of the last variety nothing need be said. Of the other two the former occurs as an infiltration of the vesical wall. It is a sessile



CARCINOMA OF THE BLADDER.
HISTOLOGICALLY: EPITHELIAL CANCER (Albarran).

tumour projecting more or less into the bladder (Plate VIII). Its surface is fungating (Fig. 95), often necrotic, ulcerated, and covered with adherent lime salts. Its base extends deep into the muscle of the organ. On the other hand, the degenerated papilloma (papillary carcinoma) has no very fixed character. It may appear to be a pure papilloma until the microscope reveals areas of carcinomatous degeneration in the pedicle (Figs. 96, 97). In a more advanced stage the tumour retains the superficial aspects of a papilloma, but the base, broad, hard, and infiltrating, is clearly cancerous.

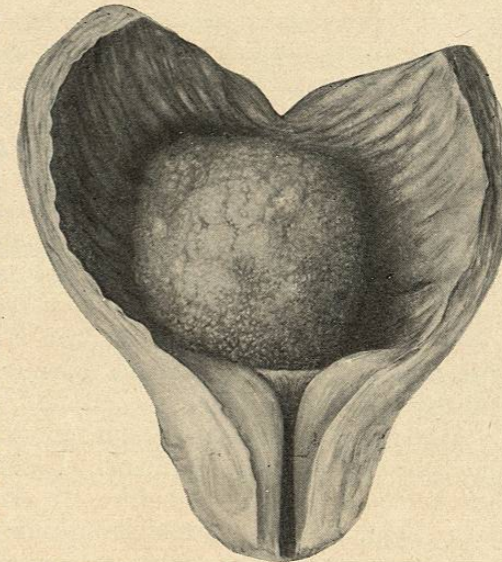


FIG. 95.—ALVEOLAR CARCINOMA OF THE BLADDER.

The older authors, and some recent ones too, recognise a class of *relapsing papilloma*, with no special limitations, but possessing the common characteristic of recurring soon after an apparently complete removal.

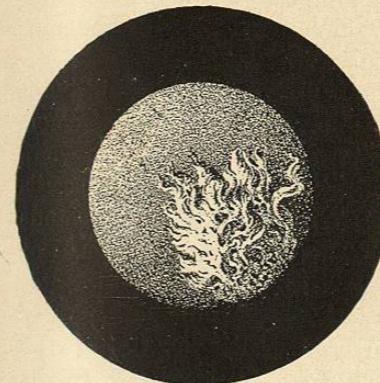


FIG. 96.—VILLOUS EPITHELIOMA
(from Albarran).

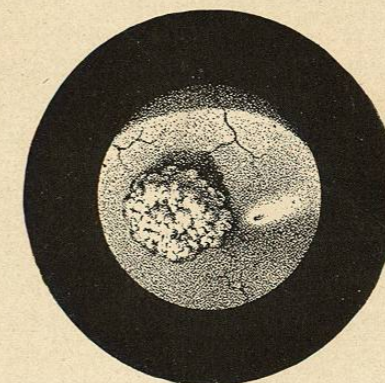


FIG. 97.—LOBULATED EPITHELIOMA
(from Albarran).

Such a fact admits of only one explanation: the tumour was not completely removed in the first place. This failure may be due (a) to overlooking some papillomatous filament distinct from the

main tumour or (b) to mistaking a carcinoma for a papilloma. The latter is the graver, and, unfortunately, the commoner error. Two conditions favour it. The carcinomatous degeneration may have only just begun, the tumour being still a pure papilloma to all appearances, and this malignant change, commencing in the pedicle, spreads as rapidly towards the base of the tumour as towards its periphery. In frank carcinomata the malignant epithelial infiltration is commonly found to extend 1 to 2 cm. into the muscular wall of the bladder beyond the area of manifest induration; and so in these cases the malignant change has often reached the muscle wall by the time the tumour is removed, and therefore this most dangerous portion of the neoplasm is overlooked and left behind unless a wide section of apparently normal muscle is excised. The prevention of this oversight—the elimination of that form of relapsing papilloma which ultimately declares its malignant character—is one of the ideals of genito-urinary surgery.

Albarran deserves the credit of explaining these transition tumours and relapsing papilloma. He showed that practically all these tumours of doubtful nature are carcinomatous, wholly or in part. Thus, among 132 vesical tumours examined, he found 100 carcinomata against 24 papillomata, a conclusion quite the reverse of what had previously been held. Guyon's aphorism expresses the same idea: "We still await in our practice the papillomata encountered in statistics."

Propagation.—Papilloma is apparently propagated only by the contact inoculation alluded to above. Carcinoma is propagated in 3 ways: (a) By contact inoculation, (b) by infiltration of the surrounding tissues, and (c) by lymphatic invasion.

A broad distinction may be laid down between the rapidity of dissemination in vesical and in prostatic growths. The former, whether carcinoma or sarcoma, progress slowly, remain for years confined to the bladder, and but rarely give rise to metastatic growths of any clinical importance. Pasteau¹ has shown that the glands along the iliac vessels are enlarged in 43% of all sessile tumours of the bladder and in 85% of infiltrated tumours; but the infection gets little further than this: the patient dies of secondary functional and inflammatory disturbances of the urinary organs. Prostatic growths, on the contrary, are disseminated throughout the pelvis with frightful rapidity, giving rise to the *carcinose prostato-pelvienne* of Guyon (p. 321). The reason for this relatively slow dissemination of vesical

¹ État du système lymphatique dans les maladies de la vessie et de la prostate, Paris, 1898, pp. 46, 52.

cal tumours is not clear. It was originally attributed to the absence of lymphatics from the bladder, later to their fewness, and recently to the presence of the perivesical fibro-lipomatous inflammation which commonly occurs as a barrier to the extension of a neoplasm, as is the case in interstitial cystitis (p. 385). Though these theories are not by any means fully explanatory, the fact that bladder neoplasms grow slowly remains true.

Secondary Lesions.—Any tumour of the bladder may undergo fatty, granular, colloidal (malignant), or calcareous degeneration. It may also become inflamed, ulcerated, or encrusted with salts of lime. Perforation of the bowel and of the peritoneum are exceptional.

The secondary changes in the urinary organs are of greater importance. The tumour acts in very much the same way as a hypertrophied prostate. It offers a point of least resistance for the origin of cystitis, and, sooner or later, it obstructs the orifice of the urethra and interferes with the contractions of the bladder, thus setting up the long train of secondary phenomena of retention with infection—cystitis, atony, pyelo-nephritis (p. 265)—terminating only with the patient's death.

Other Tumours.—The other tumours of the bladder are not sufficiently frequent to require more than a summary consideration.

Sarcoma.—Round-celled, spindle-celled, mixed-celled, lympho-sarcoma, fibro-sarcoma, myosarcoma, myxosarcoma, alveolar, giant-celled, telangiectasic, and chondrosarcoma are described. The tumour usually encroaches but little on the cavity of the bladder. It appears either as a hard sessile growth or an intramural infiltration. Its surface may be smooth, papillary, or ulcerated.

Myxoma (Polyp).—Pure myxoma is exceedingly rare. The growth is usually a fibromyxoma or a myxosarcoma. The surface of the tumour is lobular and smooth, resembling polypus of other regions.

Fibroma.—Pure fibroma is very rare. The tumour being benign, usually small, and of firm texture, passes unnoticed during life, unless, as in Qahoubian's¹ case, it grows large enough to interfere with micturition.

Myoma.²—This tumour is benign, may be intravesical, interstitial, or subserous, and, like the fibroma, passes unnoticed unless it interferes with the mechanism of urination.

Cysts.—Several varieties of cysts occur in cystitis. They have no clinical significance. Urachus cysts receive special consideration at the end of this chapter. Albarran describes a cystadenoma.

¹ Guyon's Annales, 1897, xv, 839. ² Cf. Ramsay, Phila. Med. J., 1900, vi, 43, 86.