

proper clothing, life out of doors, travelling, change of climate, anti-strumous medication. These means, intelligently combined, sometimes effect a cure. The climatic cure is the best. If an abscess is found before it has burst into the bladder or the rectum, it should be opened from the perineum, drained and scraped. Curetting the prostatic urethra is likely to do more harm than good. Prostatectomy should not be thought of.

PROSTATIC STONES AND CONCRETIONS

Prostatic stones or calculi are, properly speaking, urinary calculi which have become lodged in the prostatic urethra or in the prostate itself. Prostatic concretions¹ are the result of a concentration of the prostatic secretion, and originate in the gland itself. These are very commonly met with in the prostates of middle-aged men. They are formed of phosphatic salts and epithelial detritus. They rarely attain the size of a pea, and, unless they exceed this size, have no clinical significance. The larger concretions become coated with phosphates, and when they give trouble they are quite indistinguishable from prostatic calculi of vesical origin.

These prostatic calculi are met with of all sizes and shapes. Several may be found separated from one another, perhaps embedded in cysts, which are dilated follicles, or, if many are present, they cause atrophy of the prostatic substance, until the prostate resembles a sack full of small stones, which may be felt rubbing against one another on pressure per rectum, giving an emphysematous-like crackling (Adams). In bad cases prostatic calculi tend to unite, projecting into the urethra, and forming curiously distorted, branched masses, dipping down into the substance of the prostate, and extending forward into the canal of the urethra, and backward perhaps into the bladder. Such masses have been found 4 or 5 inches long. One, removed by T. Herbert Barker, is referred to by Thompson as composed of 9 portions, weighing, collectively, 3 ounces, 4 drams, and 1 grain—about 110 grammes.

Symptoms.—The stones may simply give rise to a rebellious prostatitis, to abscess of the prostate, or to symptoms closely resembling vesical stone. They are often the unrecognised cause of long-standing trouble. Unless they can be felt from the rectum or by a urethral

¹ Cf. Siegert, Virchow's Archiv, 1892, cxxix, 513; Pasteau, Guyon's Annales, 1901, xix, 417; Spencer, Phil. Med. J., 1900, vi, 457.

instrument, their existence remains unsuspected until disclosed by perineal section.

Treatment.—The stones should be removed by median perineal section.

URETHRO-RECTAL FISTULÆ

Urethro-rectal fistulæ are very rare. They commonly involve the prostatic urethra. They are caused by trauma (catheterization, lithotomy), abscess of the prostate, tuberculosis, or malignant disease. Tubercular and cancerous fistulæ are quite incurable and need not concern us. Traumatic and inflammatory fistulæ, on the other hand, commonly recover. I once opened a prostatic abscess into the rectum only to find that it had just burst into the bladder. The resultant fistula healed in four weeks. Thompson's¹ case, cured by urinating while on his hands and knees, would, perhaps, have recovered spontaneously.

Treatment.—A large proportion of the cases do not recover spontaneously. They require operative interference. Preliminary cauterization of the fistula may be tried, but success need not be anticipated from such treatment. As a preliminary measure all strictures of the urethra must be cured. Whatever operation is performed should include division of the sphincter ani, preferably by posterior proctotomy. By these means the urethral and rectal channels are freed from all impediments. Continuous drainage of the bladder through the perineum or the urethra is advisable.

Among the many operations suggested to cure this condition the one advanced by White and Martin² may be selected. The fistula is exposed through a curved prerectal incision, and thoroughly scraped or excised. Rectal and urethral orifices are then freshened and sutured with catgut. The wound is lightly packed. The authors omit any mention of draining the bladder by a retained catheter or a perineal tube, or of dividing the rectal sphincter by posterior proctotomy, both of which procedures would seem essential to success. An operation successfully carried out by Zembieski and by Fuller may be borne in mind. The feature was dissecting loose the end of the rectum like a cuff, and rotating it so that the two fistulous openings were not opposite each other. In this and all similar attempts it is wise to drain the bladder by perineal tube. (Cf. Orville Horwitz³ and J. P. Tuttle.⁴)

¹ Diseases of the Urinary Organs, 8th Ed., 1888, p. 175.

² Genito-Urinary and Venereal Diseases, 1898, p. 259.

³ Phil. Med. J., 1901, vii, 70.

⁴ Matthews's Quarterly J., 1898, v, 103.

ATROPHY OF THE PROSTATE

Atrophy of the prostate is uncommon. It may occur after the substance of the organ has been materially injured by abscess within or by pressure of a stone outside. Physiological atrophy of the prostate occurs in a certain proportion of old men. This atrophy Thompson observed 11 times among 164 persons over sixty years of age. Messer met with it 20 times in 100 cases (von Frisch), and others give still higher estimates.

The prostate fails to develop in eunuchs, and many authors believe that it atrophies after castration in later life. Idiopathic failure of development has also been observed.

In the atrophied prostate the glandular tissue is shrunken and wasted, and the stroma is but little affected.

Symptoms.—The symptoms of atrophy of the prostate are somewhat obscure. Both enuresis and retention have been attributed to it. Although I have met with it a number of times in old men I have never seen any symptoms referable to it. On the contrary, I have seen retention with atrophy of the prostate relieved by the removal of its cause—contracture of the neck of the bladder.

CHAPTER XVI

HYPERTROPHY OF THE PROSTATE

THE true nature and pathogenesis of hypertrophy of the prostate are not known. We can only describe it as a disease of the latter years of life, a chronic, non-inflammatory hyperplasia of all the tissues of the gland, but especially of the epithelial elements, diffuse in its character, and subject to inflammatory attacks and secondary fibrous metamorphosis.

ETIOLOGY

Age.—The one thing known about the etiology of prostatic hypertrophy is that it occurs at middle age, never giving any trouble before the forty-fifth year, and rarely appearing after the seventieth. Although individual cases have been reported at the ages of nineteen (Stretton), twenty-five (Englisch), thirty-seven (Thompson), etc., the disease cannot be looked for before forty-five. Lydston and others believe that the prostate begins to hypertrophy in the third decade of life, yet there is no clinical evidence of any such change until twenty years later. In fact, the patients begin to suffer, for the most part, between the ages of fifty and sixty.

To explain the relative infrequency of hypertrophy of the prostate after the seventy-fifth year, Thompson has advanced the theory that the physiological atrophy of old age makes itself felt at this time of life, so that if a man escape until then he is all the more likely to escape thereafter. This senile atrophy does not, however, promise any relief to the sufferer, for when once the urinary mechanism has been upset by the hypertrophy the secondary phenomena cannot be alleviated by any slight atrophy of old age.

Frequency.—According to Thompson's figures, 34% of men reaching the age of sixty have enlarged prostates, and less than half of these (15% to 16% of the whole) suffer from the disease. Many authors give far higher estimates. Thus Johnson,¹ in examining the prostates of 360 men, found hypertrophy present in 79%, yet only 16%

¹ Internat. J. of Surgery, 1899, xii, 98.