ON COMPLETE REMOVAL OF THE PROSTATE

A PRELIMINARY COMMUNICATION

BY

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It will be generally agreed that the extravesical approach to the prostate introduced by Millan presents considerable advantages over the older transvesical methods. It enables one to observe every step of the operation in a way which was formerly impossible, bleeding is readily controlled, and the post-operative period is short and easy. Some recent experiences have, however, suggested to me that the operation for prostatic obstruction performed by this route is still capable of substantial development, and although some considerable time must elapse before this can be established it seemed worth while to place these experiences on record.

History of a Case

In operating a short time ago upon a man of 75 with obstruction of some standing I was surprised to find that instead of enucleating an adenoma as I intended I was enucleating the entire prostate, which had become detached from the triangular ligament. Moreover, on drawing the prostate away from the triangular ligament a tube of urethra emerged from that structure as a substantial muscular cylinder four centimetres in length. The only course was to divide this tube close to the prostate, which was then easily excised from the neck of the bladder after division of the ejaculatory ducts. The urethra was sutured to the neck of the bladder, and the latter was then sutured firmly to the triangular ligament, completely obliterating the prostatic cavity. To my great relief the operation was a complete success, the patient, a rather feeble old man, passing water normally on the sixth day.

Anatomy of the Prostate

On discussing the case with Prof. Wood Jones he told me that the free urethral tube is a fact of normal anatomy, although it was quite new to me, and I know of no reference to it in any textbook. What was abnormal in my patient was the ease with which the prostate became detached. I have since carried out a number of dissections which fully confirm this view. The normal anatomy is as follows:

The prostate is attached to the back of the pubes by two dense

FIG. 1.—Normal anatomy.

FIG. 2.—Ligaments divided; prostate retracted.

FIG. 3.—Urethra divided; prostate excised.

FIG. 4.—Urethra sutured to bladder.

FIG. 5.—Bladder sutured to urogenital diaphragm.

bands of great strength—the pubo-prostatic ligaments. Each of these forms a rounded tendon three or four millimetres in diameter, separated by a deep recess, the cave of Retzius, into which emerges the dorsal vein of the penis. On dividing these ligaments the prostate is easily shelled out from its bed, which is formed in front by the levator prostatae muscles and further back by the dense fascia of Dénouvilliers, which separates the prostate from the rectum. As the prostate is drawn upwards the membranous urethra emerges from the compressor muscles of the triangular ligament as a muscular tube three to four centimetres in length. It is true that a venous plexus is opened up, as this surrounds the prostate, but it does not appear to be of great moment and bleeding from it is easily controlled.

The existence of this urethral tube is obviously of great importance, for it enables us to provide a complete epithelial lining after removal of the prostatic urethra, and would seem to avoid any risk of stricture. It is of course a fragile tube and requires careful handling, but it is substantial enough to allow of accurate suture into the neck of the bladder. It is convenient to proceed as follows.

Operative Procedure

A No. 12 rubber bougie is passed into the urethra as far as the prostate or into the bladder. The prostate is exposed by a suprapubic incision and drawn upwards so that the pubo-prostatic ligaments are clearly seen. These ligaments are now divided, the bougie providing a guide to protect the urethra, when on drawing the prostate upwards the urethra will emerge from the triangular ligament carrying the bougie. The prostate can now be shelled out from its bed without difficulty; the bougie is withdrawn from it, but remains in the urethra, which is divided at the apex of the prostate. The prostate is turned forward and detached from the bladder after dividing the ejaculatory ducts. The bougie supporting the urethra is passed into the bladder and out through a puncture in its wall. The urethra is sutured with fine catgut to the neck of the bladder, which is now securely sutured to the triangular ligament, obliterating the prostatic cavity. The

bougie is withdrawn through the bladder so far that it remains as a support for the new junction between the bladder and the urethra. The bladder is drained by a suitable suprapubic tube, into which the end of the

bougie may conveniently be fixed. The bougie may be removed in four days and the suprapubic tube as soon as it is certain that the patient can pass water.

FIG. 6.—Normal anatomy.

FIG. 7.—Ligaments divided; prostate retracted.

Comment

The operation described is of course only a development of the brilliant operation devised by Millan, but it may be a development with considerable possibilities. If further experience confirms its practicability it would seem to present certain definite advantages. The prostate is removed as a whole and the technique of its removal is little affected by its precise pathology. Indeed, it might well be applicable to early carcinoma. The cavity left is completely obliterated and later haemorrhage is unlikely. A complete urethra is provided from the outset and the risk of a stricture is minimized. So far the operation has been carried out in only a few cases, and obviously a wide experience will be required before its value can be assessed. But it would seem to be based on sound anatomical principles, and sufficient success has already been achieved to convince me that it is worthy of an extended trial.

The following recommendations on visual standards for candidates for the teaching profession have been made by the Faculty of Ophthalmologists at the request of the Ministry of Education: (1) Visual acuity, with correcting glasses, should not be less than 6/12 in the better eye. (2) At the age of 18 no refractive error should debar a candidate from training, but all cases in which the vision in either eye is less than 6/9 uncorrected must be referred for an ophthalmic surgeon's report and prognosis. (3) On reference to an ophthalmic surgeon information is required on the following points: (a) The nature and extent of the defect; (b) whether it can be corrected by glasses satisfactorily for the project in view; (c) whether it is progressive; (d) whether the existence of the defect is likely to interfere with the candidate's efficiency as a teacher.

A NEW EUPHORIANT FOR DEPRESSIVE MENTAL STATES

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The Syndrome of Thalamic Dysfunction

The syndrome of thalamic dysfunction, or neurotic depression, is the commonest of psychiatric conditions encountered in general practice, and often one of the most intractable and difficult to treat effectively. The commonest forms of the condition are the chronic neurotic depressions, anxiety states, reactive and hysterical depressions, and obsessional disorders. The milder forms of depressions of later life, in which the dysphoria is unaccompanied by hallucinosis, delusions, and other gross psychotic symptoms, may also be included in this group of conditions.

The essential feature common to all of these disorders is a condition of the nervous system in which the perception-threshold for unpleasant affects and sensory impressions is markedly lowered, while that for pleasant affect and sensation is correspondingly raised—the anhedonic or dysphoric syndrome. The resulting dysphoria or mental pain may present itself in one or two forms, or a combination of both. In the manifest type it takes the form of conscious depression or unpleasant mental tension; in the sensorial or conversion type it presents itself as a persistent and disagreeable bodily sensation, either localized or diffuse, common examples of which are pressure-headache, generalized pains, hyperalgesia, gastric pains without organic basis, vertigo, and feelings of abnormal tiredness and weakness.

Although it is generally taught at the present day that these conditions are entirely psychogenic in origin, there would appear to be strong evidence that the basis of the condition is primarily a disturbance of the thalamic-hypothalamic mechanisms, possibly a metabolic disorder. Suggestive facts are the absence in a large proportion of such cases of any evidence of mental conflict, and the concomitant symptoms of disturbed body-metabolism and autonomic imbalance, such as vasomotor disturbances, central nervous instability as shown by muscular tremors, hyperalgesia, and other sensory disorders, vegetative disturbances, and metabolic anomalies as demonstrated by biochemical tests.

The commonest symptoms of thalamic dysfunction in order of frequency are: depression, irritability, and emotional instability, with anxiety and sense of unpleasant mental tension, in the affective sphere; in the sensory sphere, pains and paraesthesias of various kinds, such as pressure-headache, various vague pains and aches of infinite variety, which may be referred to any part of the body, gastralgia, low backache, and dysuria or other symptoms referred to the urogenital tract; in the sphere of thought, inability to concentrate, obsessional thoughts, phobias, and transient periods of confusion ("black-outs"); in the motor system, tremors, sensations of weakness and loss of energy, with abnormal tiredness; and in the vegetative systems, insomnia, anorexia, gastrointestinal disturbances, vertigo, sexual dysfunctions, and vasomotor symptoms such as flushing, palpitations, effort syndrome, and syncopal attacks without apparent organic basis.

The thalamic dysfunction state may be regarded as a response of the organism to stresses of various kinds. It is one of the commonest causes of chronic ill-health and