



Quality Improvement Activities in Prostatectomy for Benign Prostatic Hypertrophy

There is increasing evidence of the effectiveness of prostatectomy for benign prostatic hypertrophy (1-3). Even in patients with moderate urinary symptoms, surgery is more effective than watchful waiting (4). However, the fact that a procedure has undergone evaluation and has been found safe and effective is not a guarantee that it will be used appropriately. The quality of care of the procedure has to be assessed to examine the extent to which the procedure is used judiciously, skillfully, and appropriately in the care of individual patients. Furthermore, the evaluation of effectiveness refers mainly to technical aspects and does not acknowledge the perspectives of the patient, and acceptability of and satisfaction with the prostatectomy. Therefore, the quality of care of prostatectomy must also be assessed and, if necessary, improved.

The common procedure, mostly performed for the palliation of symptoms, involves a significant complication rate (5), more so in the transurethral approach than in the open operation. The assessment of the quality of care should mainly address the process depending on operation type (open v. transurethral) and two outcome indicators, ie, improvement in the quality of life of the patient and perioperative complications.

From the patient's point of view, the operation is intended to relieve him of the discomfort and bother due to the symptoms of prostatism, such as fear of incontinence, anxiety about being far from a toilet, embarrassment because of frequent visits to the rest room, pain due to retention of urine, or the concern about possible sexual dysfunction. The effect of surgery on the symptoms is the most significant outcome for the patient; it improves his quality of life and remains relevant for him for many years. It is more important to him than transient events, such as a few additional days of hospitalization because of complications, or the need for blood transfusion. However, considerable variation exists in the impact of similar symptoms on different patients (4,5) and this outcome of symptom effect palliation may lack the sensitivity as a measure for comparing performance between various providers of care.

The other outcome measure of quality of care of prostatectomy for benign prostatic hypertrophy is the occurrence of adverse events, ie, perioperative complications that may be more sensitive to small varia-

tions in skill among providers of care. Adverse events, such as hemorrhage (when hemostasis is insufficient), surgical wound infection (when aseptic practice is poor), or exacerbation of comorbidity (when perioperative management is inadequate) may be of little significance for the individual patient, compared with the palliative effect of the procedure (6). However, they cause temporary suffering and may result in long-term complications. They are also associated with the need for additional medical care, prolonged hospital stay, and higher costs of treatment (7).

A study examining and comparing the two types of outcome among different providers was conducted in the area of Tel Aviv, Israel (8). The study compared 506 consecutive patients who underwent prostatectomy (transurethral or open) for benign prostatic hypertrophy during one year (1991-1992) in three university-affiliated medical centers. A specially trained nurse interviewed all patients before the operation, with the help of a structured, precoded questionnaire. The questionnaire included sociodemographic data, medical history, and questions regarding symptoms of prostatism. Further data concerning the results of imaging and laboratory tests, as well as comorbidity data, were gathered from the hospital charts. Immediate postoperative complications were entered into the appropriate section of the questionnaire, including hemorrhage, the need for blood transfusion, surgical wound problems, temperature over 38 °C for two days, meatus stricture, urinary retention, urinary tract infection, complication of anesthesia, surgical complications (such as perforation of prostatic capsule or of the bladder), need for immediate reoperation, and death. Four months after the operation, the nurse conducted an additional interview (by telephone) with all patients, and addressed the effect of the procedure on the symptoms. After adjusting for case mix with a multi-linear regression model, the analysis found no true difference between the three centers in the symptom effect. However, the analysis of outcome of perioperative complications (also, after case mix adjustment) showed an outlier (Center C), with mainly excess bleeding and blood transfusion, particularly in the transurethral type of operation. Following this finding, a careful examination of this Center's surgical techniques and hemostasis practices was undertaken by the management of the Center to improve the quality of care.

This was a small-scale study. Larger studies which compare more than three providers could yield additional information (9,10). A multicenter audit conducted by the Royal College of Surgeons of England, showing that such a comparative audit was feasible at low cost, included 5,094 patients who underwent prostatectomy for benign prostatic hypertrophy by 103 surgeons in four health regions over six months in 1992 (11). Two questionnaires were prepared. The hospital questionnaire, completed by the principal operating surgeon, included questions on the preoperative phase, answered retrospectively, and questions on the perioperative care, answered prospectively. It included variables of mode and category of admission, preoperative examinations, physical health status (expressed in ASA grade according to the American Society of Anesthesiology), operation and anaesthetic details, postoperative complications, and mode of discharge. The other questionnaire, completed by the patients, contained questions on symptoms and their impact on life style, sexual function, type and usefulness of information received, satisfaction with care, and experience after discharge in terms of complications, visits to general practitioner, and hospital readmission. The result of the study was that participating surgeons were able to compare their two outcome indicators, both with each other and against pooled data in a format analogous to a confidential comparative audit (12). Influenced by peer pressure and the prospect of having the results of their units compared with those of their peers, 90% of approached surgeons agreed to participate. Patients were eager to report the outcome of their surgery and only a few of them found the questionnaire difficult. For 95% of the respondents, data were available for all variables, the only question with a high number of missing data was sexual function in general and ejaculatory characteristics in particular (11).

Whether conducted on a small-scale or a large one, the first step in a quality improvement of prostatectomy for benign prostatic hypertrophy is the comparison of the two outcome indicators of providers after case mix correction and type of operation. When an outlier is identified, further investigation should be performed to establish the cause, appropriate corrective intervention should be implemented, and its effectiveness verified.

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References

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