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COMBINED PROSTATECTOMY AND RETROPUBIC PROSTATECTOMY ON PATIENTS EIGHTY YEARS OLD OR OLDER WITH BENIGN PROSTATIC HYPERPLASIA

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Combined prostatectomy and retropublic prostatectomy were performed on 20 patients eighty years old or older with benign prostatic hyperplasia. A comparative assessment of two surgical methods regading to operative blood loss, operating time and postoperative complications was presented. The procedure of combined prostatectomy revealed a smaller amount of operative blood loss, less operating time and lower incidence of complications when compared to retropubic prostatectomy. This modified method of suprapubic-retropubic prostatectomy appears to offer several advantages over other open methods of prostatectomy.

Key words: Combined prostatectomy, Eighty years old

The retropubic approach of prostatectomy was introduced in 1948 by Millin[1]. The ability to examine the prostatic fossa and to control hemostasis by suture ligation of bleeding points is the apparent advantage of this approach over others. Early suture ligation of the plexus of Santorini also aids in hemostasis. However, there are several disadvantages of the classical retropubic approach : 1) inability to examine the bladder adequately, 2) injury to the lateral pelvic plexus of veins and 3) the transverse capsular incision at times during the enucleation extends into the lateral depths of the prostatic capsule, making a watertight closure difficult.

The technique of combined prostatectomy was first described by Councill[2] and Bourque[3]. Their techniques helped to eliminate some of the aforementioned disadvantages of retropubic prostatectomy.

During the last 10 years we experienced open prostatectomy in 20 patients eighty years old or older with benign prostatic hyperplasia. Combined prostatectomy was performed on 10 patients and retropubic prostatectomy (RPP) was performed on 10 other patients. We compared these two procedures in regard to amount of operative blood loss, operating time and postoperative complications.

MATERIAL AND METHODS

Between 1976 and 1985, open prostatectomy was performed on 20 patients who ranged in age from 80 to 89 years, the average being 84 years.

Ten patients underwent combined prostatectomy and ten other patients underwent classical retropubic prostatectomy. Combined prostatectomy was made in 4 patients under epidural anesthesia and in 6 patients under general anesthesia. RPP was made in 6 patients under epidural anesthesia and in 4 patients under general anesthesia. Preoperative evaluation including cardiovascular, pulmonary, renal, hepatic and metabolic status was assessed. The most frequent preoperative complications were hypertension and abnormal findings of electrocardiogram. All pati-

ents stayed in the surgical intensive care unit for 24 to 48 hours after the operation.

Statistical analyses of the data were obtained by paired Student's t-test.

RESULTS

As shown in Table 1, the average amount of blood loss in combined prostatectomy was lower than that in RPP (not significant) and average operating time in combined prostatectomy was less than that in RPP (not significant). The resected adenoma weighed between 25 and 108 gm. The average weight was 50.3±9.83 and 55.4±8.62 gm. in combined prostatectomy and RPP, respectively There were 3 patients with a resected adenoma weighing more than 100 gm. Four patients who underwent combined prostatectomy required intraoperative transfusions of blood, while 9 patients who underwent RPP were given blood transfusions during operation. The postoperative hospitalization averaged 15.1 and 18.3 days in combined prostatectomy and RPP, respectively. There was only one incidental carcinoma found in the resected adenoma in routine pathological examination (5%).

Postoperative complications were seen in 10 patients (Table 2). The most frequently encountered complication was pneumonia, seen in 4 patients. Vasectomy was not performed in this series and there were 2 instances of epididymitis that did not postpone the hospital stay or delay recovery. Septicemia was noticed in 1 patient who responded well to systemic chemotherapy. Vesicocutaneous fistula observed in the patient who underwent combined prostatectomy was successfully treated with indwelltd catheter for 8 days. One patient who underwent combined prostatectomy had two complications of pneumonia and vesicocutaneous fistula. Psychiatric or mental disturbance, pyelonephritis and wound dehiscence were seen in the patient who underwent RPP. There was no intraoperative or postoperative mortality. The incidence of complications after the combined prostatectomy was lower than that after the retropubic prosta tectomy in this series.

Table 1. Average operative blood loss, operating time and weight of the resected adenoma in series of combined prostatectomy and retropubic prostatectomy. Difference between two procedures is not statistically significant both in amount of blood loss and operating time ($P>0.05$). Values are means±Standard error of the mean.

	Amount of Blood Loss (ml.)	Operating Time (min.)	Wt. Resected (gm.)
Combined Prostatectomy	617.2±152.2	79.3±7.65	50.3±9.83
Retropubic Prostatectomy	1048.9±214.6	110.4±8.60	55.4±8.62

Table 2. Complications in 10 patients after combined prostatectomy and retropubic prostatectomy.

Complications	Combined Prostatectomy	Retropubic Prostatectomy
Pneumonia	2	2
Epididymitis		2
Septicemia	1	
Psychiatric or mental disturbance		1
Acute pyelonephritis		1
Wound dehiscence		1
Vesicocutaneous fistula	1	

DISCUSSION

With an increase in the mean age of the population, more elderly patients become potential candidates for major surgery. Apart from age, other factors such as the operative method and the presnce of chronic systemic disease add significant risk to morbidity and mortality in surgery for elderly patients. The combined prostatectomy procedure in an elderly patient group revealed favorable results that were less operative blood loss, less operating time and lower incidence of postoperative complications when compared to retropubic prostatectomy. The low incidence of complications in combined prostatec-

tomy is secondary not only to refinement in surgical techniques but also to improvement in perioperative evaluation and care. The latter is especially important since the majority of the patients undergoing open prostatectomy have multiple concurrent medical problems and functional reserve of various internal organs declines significantly with advanced age.

The frequent occurrence of pneumonia in the present series suggests the latent presence of impaired left ventricular function from arteriosclerotic heart disease which is not infrequent in this age group. Septicemia was noticed in the patient who underwent combined prostatectomy. This patient came to operation with urine already infected due to previous catheterization for the relief of acute retention. Murphy et al[4]. asserted that to prevent the postoperative septicemia, patients with preoperative infection should be administered by appropriate antibiotics at operation and if retention does occur, prostatectomy should be performed as soon as possible. Ziffren and Hartford[5] reported mortality rates of patients submitted to various major surgeries according to the age of the patients and showed that the mortality rate related to open prostatectomy was 20 percent in patients above 80 years of age and 13.2 % in those under 80 years old. However, no mortality was recognized in our series. The length of postoperative hospitalization in our series is longer than in previously reported series[6,7]. These results may be due to the difference of the skill in operation and selection of patients.

A key maneuver in the combined prostatectomy is the placement of the suture ligature at the distal end of the incision near the prostatic apex. Tlis suture is of paramount importance in preventing distal extension with resultant damage to the external sphincter and also difficulty in closing the incision. The trigonal stitch serves to reduce hemorrhage, promote epithelialization and, possibly, to prevent bladder neck contracture.

Our present results do not provide clear evidence of the superiority of combined prostatectomy over other open methods of prostatectomy, since many other factors, such as the skill and experience of the surgeon, meticulous perioperative care and selection of patients, impact upon the results obtained. However, the low postoperative morbidity and absence of operative mortality in our group of patients indicate that elective combined prostatectomy can be well tolerated in the older age group.

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和文抄録

80歳以上高齢者前立腺肥大症に対する恥骨上式恥骨後式前立腺摘除術変法及び恥骨後式前立腺摘除術

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80歳以上の高齢者前立腺肥大症20例に対し，恥骨上式と恥骨後式を組み合わせた前立腺摘除術変法と恥骨後式前立腺摘除術を施行した．この二つの術式に関し，術中出血量，手術時間，術後合併症について比較検討を行なった．その結果，前者は後者に比して，術中出血量が少なく，手術時間も短く，更に術後合併症の頻度も低かった．この恥骨上式法と恥骨後式法とを組み合わせた前立腺摘除術は，他の術式に比し，幾つかの利点を持つように思われる．