

OPERATIVE DICTATIONS IN  
**UROLOGIC  
SURGERY**

NOEL A. ARMENAKAS | JOHN A. FRACCHIA | RON GOLAN



WILEY Blackwell

## **Operative Dictations in Urologic Surgery**

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*To all the past, present, and future residents who continue to inspire us  
and from whom we never cease to learn.*

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## Foreword

This is an essential book for all urological surgeons. It should be studied by urological residents as well as mature urological surgeons to enhance the knowledge of information needed in an operative report.

The details of the necessary information in an operative report are provided for virtually all urological procedures that I can think of, including open surgery as well as endoscopic, percutaneous, laparoscopic, and robotics. Each procedure has a template that serves as a valuable guide for the detailed information to be included in the operative record so it provides essential information should the surgeon need to recall what was done if complications occur or the procedure fails, and it is available for review years later if necessary.

In addition, the operative record is a legal document, and detailed procedures are necessary should a medico-legal issue arise. In my review of operative dictations in medico-legal issues, I find operative reports are frequently inadequate and deficient in details of the operation. A sound operative report can address many issues that can potentially arise, and this book provides the necessary guidance in a format that will result in an excellent, comprehensive report even in the most complex procedures.

Another wonderful aspect of this book is that it serves as a verbal atlas for the 126 surgical procedures provided. A surgeon can read the examples of each procedure and, with previous understanding of anatomy and pathology, can know in detail, from start to finish, how the procedure is done. I find this a rewarding feature.

The authors, Professors Armenakas and Fracchia, are outstanding surgeons who have successfully demonstrated in this book the detailed methodology of composing an operative dictation. They have included Dr. Golan, the chief urology resident at Cornell, to have input and insight from a young surgeon, which adds diversity and completeness to the project.

This is a unique book and a “must” for every urologist.

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## Preface

*Teaching is the highest form of understanding.*  
—Aristotle—

The impetus for writing *Operative Dictations in Urologic Surgery* arose from the need for a dedicated operative dictation text that describes each surgical procedure in a stepwise, methodical, and detailed format. The available urologic surgical atlases, which are exceptional, provide a hybrid operative description combining high-level illustrations with a narrative. Our objective was to focus and expand on the narrative and create a step-by-step “cookbook”-type description in a comprehensive, all-inclusive operative dictation format. In addition, for each procedure we have included the indications, essential steps, variations and complications. Space is provided after each section to allow for user notes.

It was not possible to describe every operation with their infinite variations. Instead, we have chosen 126 of the most relevant adult and pediatric urologic surgical procedures, and included both open and minimally invasive techniques. Although there are many technical options for each procedure, ranging from the sutures used to the details of each surgical step, we have attempted to incorporate a comprehensive operative description that is accurate, informative, and universally applicable. Details including types of retractors, sutures, dressings, etc. are meant only as a guide and will understandably vary from surgeon to surgeon.

In undertaking the preparation of this textbook, we have referenced multiple texts and atlases, including *Hinman’s Atlas of Urologic Surgery*, *Glenn’s Urologic Surgery*, *Atlas of Urologic Clinics*, and *Campbell-Walsh Urology*. These valuable resources, coupled with our personal surgical experiences totaling more than 75 years in aggregate, provide the basis of this book. Each of us separately and independently reviewed and critiqued all of the material. For this reason, we decided not to assign authorship to any of the individual chapters.

We acknowledge and thank all our teachers and residents who have educated, guided, and inspired us throughout the years. It is our hope and expectation that *Operative Dictations in Urologic Surgery* will serve preoperatively as a valuable and informative resource in preparation for surgery and will assist postoperatively in creating a dictation that is comprehensive, accurate, and medico-legally sound. We are grateful for the opportunity to share these operative dictations with you and welcome your comments and suggestions.

Please send email communications to: [operativedictations@gmail.com](mailto:operativedictations@gmail.com)

## SECTION I OPEN SURGERY

- *Adrenal*
- *Bladder*
- *Kidney*
- *Lymphatics*
- *Penis*
- *Prostate*
- *Testis and Scrotum*
- *Ureter*
- *Urethra*
- *Urinary Diversion*

## Adrenal



# 1

## Adrenalectomy

### Indications

- Select adrenal tumors or metastases

### Essential Steps

- 1) Perform the appropriate preoperative catecholamine blockade in patients with suspected pheochromocytoma.
- 2) Expose the adrenal gland and identify, dissect, and ligate the adrenal vein and inferior adrenal artery. With pheochromocytomas, this should be done initially prior to any adrenal manipulation in order to limit hemodynamic instability from blood pressure changes caused by catecholamine release. The anesthesiologist should be informed prior to any adrenal manipulation in these instances.
- 3) Gently mobilize the adrenal gland cranially and divide its superior vascular supply.
- 4) Using lateral and upward traction on the adrenal gland, divide the remaining medial vascular attachments.
- 5) Dissect the adrenal gland caudally off the kidney.
- 6) After removing the adrenal gland, inspect for renal or vascular bleeding and pleural tears.

### Note These Variations

- The choice of incision is dependent on the anatomic characteristics of the tumor (including size, extension, and histology), the patient's body habitus, and the surgeon's preference and comfort. Large tumors, or locally invasive tumors extending superomedially, and bilateral tumors can be managed with a thoracoabdominal or transabdominal (e.g. Chevron) approach, respectively. Alternatively, a posterior approach may be considered in patients with small localized tumors.
- In cases of renal invasion by large adrenal carcinomas, *en bloc* resection of the adrenal gland and kidney should be performed.

- If there is any suspicion of lymphatic invasion, after removal of the adrenal gland a regional lymphadenectomy should be performed from the level of the renal vessels to the diaphragmatic crus.

## Complications

- Bleeding
- Infection
- Hemodynamic instability
- Intraabdominal organ injury
- Pneumothorax
- Ileus
- Adrenal Insufficiency

## Template Operative Dictation

**Preoperative diagnosis:** Adrenal tumor

**Postoperative diagnosis:** Same

**Procedure:** *Right/Left* adrenalectomy

**Indications:** The patient is a \_\_\_\_-year-old *male/female* with a \_\_\_\_ cm *right/left* adrenal tumor presenting for an adrenalectomy.

**For pheochromocytoma:** The biochemical evaluation was consistent with a pheochromocytoma and the appropriate preoperative medical management completed.

**Description of Procedure:** The indications, alternatives, benefits, and risks were discussed with the patient and informed consent was obtained.

The patient was brought onto the operating room table, positioned supine, and secured with a safety strap. Pneumatic compression devices were placed on the lower extremities.

After the administration of intravenous antibiotics and general endotracheal anesthesia, a 16Fr urethral catheter was inserted into the bladder and connected to a drainage bag.

The patient was placed in the lateral decubitus position at a 45° angle with the lower leg flexed 90° and the upper leg extended. An axillary roll was positioned to protect the brachial plexus and a gel pad placed to support the back. Multiple pillows were used to pad beneath and between both the upper and lower extremities to ensure adequate cushioning. The kidney rest was elevated and the table flexed and adjusted horizontally, obtaining optimal flank exposure. The patient was secured to the table with 3 in. surgical tape and safety straps, and was prepped and draped in the standard sterile manner.

The radiographic images were in the room.

A time-out was completed, verifying the correct patient, surgical procedure, site, and positioning, prior to beginning the procedure.

The space between the 10th and 11th ribs was palpated and an incision made at this level from the mid-axillary line and extended medially to the lateral border of the rectus abdominis muscle. Using electrocautery, the latissimus dorsi and external oblique muscles were incised, exposing the underlying ribs. The intercostal attachments were transected, taking care to avoid injury to the pleura and neurovascular bundle on the inferior surface of the rib. The internal oblique muscle was divided with cautery and the transversus abdominis carefully split in the direction of its fibers, avoiding entry into the peritoneum. A generous paranephric space was created by sweeping the peritoneum medially and the retroperitoneal connective tissue superiorly and inferiorly. A self-retaining retractor (e.g. Bookwalter, Omni-Tract) was appropriately positioned to optimize exposure, using padding on each retractor blade.

The parietal peritoneum was incised on the white line of Toldt and the colon reflected medially, exposing Gerota's fascia.

**On the right:** The hepatic flexure and duodenum were mobilized, freeing the kidney and adrenal gland within Gerota's fascia superiorly and medially. The hepatorenal ligament was divided sharply and the liver lifted cranially off the anterior surface of the adrenal gland. Gerota's fascia was incised, exposing the anterior surface of the kidney and adrenal gland. The lateral wall of the inferior vena cava was dissected and the insertion of the right adrenal vein identified posterolaterally. The right adrenal vein was carefully dissected, doubly ligated with 2-0 silk ties and divided. The inferior adrenal artery was then secured and similarly divided.

**On the left:** The splenorenal ligament was mobilized and divided sharply freeing the kidney and adrenal gland within Gerota's fascia superiorly, and the spleen and pancreatic tail which was lifted cranially off the anterior surface of the adrenal gland. Gerota's fascia was incised exposing the anterior surface of the kidney and adrenal gland. The insertion of the left adrenal vein into the left renal vein was identified. The left adrenal vein was carefully dissected, doubly ligated with 2-0 silk ties, and divided. The inferior adrenal artery was then secured and similarly divided.

The dissection was continued cranially, using gentle downward traction from lateral to medial. Multiple small adrenal branches were ligated using *an electrothermal bipolar tissue sealing device (LigaSure)/surgical clips*, freeing all apical adrenal attachments. (Alternatively, these vessels can be clamped, divided, and ligated with chromic or silk ties). The adrenal gland was retracted laterally exposing the remaining medial vascular and lymphatic attachments, which were divided between surgical clips. Finally, the inferior surface of the adrenal gland was dissected off the renal capsule using sharp and blunt dissection, and meticulous hemostasis obtained with electrocautery.

Once the specimen was completely freed, it was removed and sent to pathology for evaluation. The retroperitoneum was irrigated with warm sterile saline and hemostasis was again confirmed. Prior to closure, the vascular stumps, visceral organs and pleura were inspected and found to be intact. The self-retaining retractor was removed, the kidney rest lowered, and the table taken out of flexion.

The incision was closed using running 1-0 polydioxanone (PDS) to approximate the three muscle layers individually, taking care not to entrap the neurovascular bundle. 3-0

chromic sutures were used on Scarpa's fascia and the skin approximated with a subcuticular 4-0 poliglecaprone (Monocryl) suture. A sterile dressing was applied and the patient repositioned supine.

At the end of the procedure, all counts were correct.

The patient tolerated the procedure well and was taken to the recovery room in satisfactory condition.

**Estimated blood loss:** Approximately \_\_\_\_\_ml

## Bladder

## 2

# Augmentation Cystoplasty

## Indications

- Medically refractory neurogenic detrusor overactivity
- Poorly compliant bladder
- Idiopathic detrusor overactivity
- Inflammatory bladder conditions (e.g. interstitial cystitis, schistosomiasis, tuberculosis) with a resultant small, noncompliant bladder
- Previously diverted patients suitable for undiversion
- Intractable autonomic dysreflexia

*Suitable candidates must be willing and able to catheterize and have normal renal function. They should be free of any small (if using ileum) or large (if using colon) bowel disease.*

## Essential Steps

- 1) Distend the bladder with normal saline through a urethral catheter.
- 2) Incise the posterior bladder wall from the level of the trigone toward the dome creating an anterior bladder flap.
- 3) Isolate and divide a segment of ileum (usually 20–25 cm) sufficient to reach the bladder comfortably and to allow an approximate four-hour interval between catheterizations after the bladder is “stretched” over the postoperative period. Use transillumination to identify the vascular arcades.
- 4) Perform a functional end-to-end ileo-ileal anastomosis, restoring bowel continuity.
- 5) Fold the posterior segment of opened ileum and close its posterior wall.
- 6) Suture the open segment of isolated ileum to the previously opened bladder wall.
- 7) Place a drain.

## Note These Variations

- A preoperative bowel prep is optional.
- A colocystoplasty or, rarely, a ureterocystoplasty can be used in select patients.

- The patient may be positioned with their legs in universal (Allen) stirrups and placed in modified Trendelenburg to enhance exposure.
- Alternatively, a suprapubic longitudinal incision (modified Pfannenstiel) may be used.
- In select cases, ureteral reimplantation and/or a continent catheterizable stoma may need to be performed.
- The ileo-ileal anastomosis may be hand-sewn, using a two-layer technique.
- A suprapubic tube with or without a urethral catheter can be used for drainage.

## Complications

- Bleeding
- Infection
- Ileus/bowel obstruction
- Bowel injury/leak
- Urine leak (enterocystoplasty)
- Urinary incontinence
- Stone formation
- Spontaneous perforation

## Template Operative Dictation

**Preoperative diagnosis:** Neurogenic bladder

**Postoperative diagnosis:** Same

**Procedure:** Augmentation cystoplasty

**Indications:** The patient is a \_\_\_\_-year-old *male/female* with a severely debilitating poorly compliant bladder presenting for augmentation cystoplasty.

**Description of Procedure:** The indications, alternatives, benefits, and risks were discussed with the *patient/patient's family* and informed consent was obtained.

The patient was brought onto the operating room table, positioned supine, and secured with a safety strap. All pressure points were carefully padded and pneumatic compression devices were placed on the lower extremities.

After the administration of intravenous antibiotics and general endotracheal anesthesia, the lower abdomen and external genitalia were prepped and draped in the standard sterile manner.

A time-out was completed, verifying the correct patient, surgical procedure, and positioning, prior to beginning the procedure.

A \_\_Fr urethral catheter was inserted into the bladder and the bladder distended with sterile normal saline to aid in dissection of the bladder wall from the peritoneum.

A midline abdominal incision was made from the umbilicus to the pubic symphysis. The subcutaneous tissue was incised with electrocautery, exposing the underlying rectus abdominis aponeurosis. This was incised at the linea alba and the rectus abdominis muscles separated at the midline and retracted laterally, taking care not to injure the underlying inferior epigastric vessels.

The peritoneum was freed posteriorly to the level of the trigone and the bowel was thoroughly packed into the upper abdomen. A self-retaining retractor (e.g. Bookwalter,

Omni-Tract, Balfour) was appropriately positioned to optimize exposure, using padding on each retractor blade. The bladder wall was identified and four 2-0 polyglactin (Vicryl) sutures were used to outline a wide U-shaped posterior incision extending from the bladder dome to an area just superior to where the ureters enter the bladder; this created a large, anteriorly based bladder flap with a posteriorly facing opening.

The bowel packing was removed and attention was focused on isolating an appropriate ileal segment. The distal ileum was inspected and a 25 cm segment of ileum was chosen, 15–20 cm from the ileocecal valve and marked with a silk suture. With the aid of transillumination, the ileocolic and right colic arteries were identified. An avascular mesenteric window was opened on each side of the desired ileal segment using an electrothermal bipolar tissue sealing device (LigaSure) to incise and ligate the mesentery on both sides, avoiding injury to the main intestinal vasculature. (*Alternatively, the mesentery can be incised and its blood vessels individually clamped, divided and doubly ligated with chromic or silk ties.*) Additional hemostasis was achieved using 3-0 chromic/silk ties. The isolated ileal segment was transected at its proximal and distal antimesenteric borders, using a GIA60 stapler.

The continuity of the distal ileum was restored using a stapled technique as follows: The antimesenteric corners of the proximal and distal ileal segments were identified, and a small segment of tissue was resected off each end of the stapled suture lines. One limb of the GIA60 stapler was inserted into the proximal and the other into the distal ileal segment with care taken not to injure the bowel mesentery. The ileal segments were rotated ensuring that the antimesenteric bowel walls faced each other prior to firing the stapler. Four small clamps were then placed on the ends of the transected bowel. The two clamps on the lines of the original bowel transection were held together, while the others were spread apart, creating a wide opening. A TA55 stapler was used to complete the functional end-to-end ileoileal anastomosis. The staple line was checked confirming its integrity, and additionally reinforced with interrupted 3-0 silk sutures. The mesenteric window was closed with a running 4-0 chromic to avoid internal herniation. The ileoileal anastomosis was returned to its natural position in the abdomen with the isolated ileal segment placed caudal to it.

Attention was then turned to the isolated ileal segment, which was opened at its antimesenteric border. Both staple lines were resected to avoid subsequent stone formation. The bladder mucosa was copiously irrigated with sterile normal saline. The posterior wall of the ileal segment was folded back on itself and sutured together with running, locking 3-0 Vicryl sutures, creating a bowel cup to be anastomosed to the bladder.

The augmentation opening in the bladder was measured and the superoanterior wall of the ileal segment was closed with interrupted 3-0 Vicryl sutures to match this opening. The configured ileal segment was sewn onto the opened bladder using running, locking 3-0 Vicryl sutures, proceeding from the most inferoposterior aspect cephalad.

An 18Fr urethral catheter was inserted into the bladder and the bladder distended with 300 ml sterile normal saline confirming a watertight reconstruction. (*Note: If a suprapubic tube is desired for drainage, it can be placed through the lateral bladder wall, not through the ileal segment.*)

Having completed the enterocystoplasty, the abdomen was irrigated with warm sterile normal saline and examined for any bleeding. Meticulous hemostasis was obtained. A surgical drain (e.g. Jackson-Pratt) was placed in the retroperitoneum and brought out at the skin through a separate stab incision, where it was secured with a 2-0 silk suture.



Prior to closure, the ureters, bladder, bowel, mesentery and abdominal wall were inspected and found to be intact without any evidence of devascularization or injury.

The self-retaining retractor was removed and the abdominal incision was closed using a running 2-0 chromic to approximate the rectus muscles and 1-0 polydioxanone (PDS) for the rectus aponeurosis. 3-0 chromic sutures were used on Scarpa's fascia and the skin approximated with a subcuticular 4-0 poliglecaprone (Monocryl) suture. The incision was reinforced with sterile adhesive strips and a sterile dressing applied. The urethral catheter was connected to a drainage bag.

At the end of the procedure, all counts were correct.

The patient tolerated the procedure well and was taken to the recovery room in satisfactory condition.

**Estimated blood loss:** Approximately \_\_\_\_\_ml

### 3

## Bladder Diverticulectomy

### Indications

- Symptomatic bladder diverticulum (recurrent infections, irritative or obstructive voiding symptoms, hematuria, bladder calculi, etc.)
- Select intradiverticular bladder tumors

### Essential Steps

- 1) Partially fill the bladder through a urethral catheter.
- 2) Expose the bladder, sweep the peritoneum superiorly and make a vertical mid-anterior cystotomy.
- 3) Resect the diverticulum using a combined intra- and extravesical approach.
- 4) Close the diverticular rent and the midline cystotomy in two layers using absorbable sutures.
- 5) Place a urethral catheter and a drain.

### Note These Variations

- Alternatively, a suprapubic longitudinal incision (modified Pfannenstiel) may be used.
- If the procedure is performed for an intradiverticular tumor, it is important to isolate the diverticulum. Laparotomy pads can be used and the mouth of the diverticulum occluded with a sponge to avoid tumor spillage.
- Small diverticula often can be managed with an entirely intravesical approach by eversion and resection.
- For paraureteral diverticula, the patency of the ureter can be further evaluated with the intravenous injection of dye (methylene blue or indigo carmine). If there has been suspected compromise to the ureter, it should be repaired and a double-J stent placed.
- Diverticula located laterally or posteriorly may require concomitant ureteral reimplantation. In such cases bladder mobilization can be facilitated by ligating the superior vesical pedicle.

## Complications

- Bleeding
- Infection
- Ureteral injury/obstruction
- Urine leak/urinoma
- Bowel/vascular injury
- Lymphocele
- Recurrent diverticulum

## Template Operative Dictation

**Preoperative diagnosis:** *Symptomatic bladder diverticulum/Intradiverticular bladder tumor*

**Postoperative diagnosis:** Same

**Procedure:** Bladder diverticulectomy

**Indications:** The patient is a \_\_\_\_\_-year-old *male/female* with a *symptomatic bladder diverticulum/an intradiverticular bladder tumor* presenting for a diverticulectomy.

**Description of Procedure:** The indications, alternatives, benefits, and risks were discussed with the patient and informed consent was obtained.

The patient was brought onto the operating room table, positioned supine, and secured with a safety strap. All pressure points were carefully padded and pneumatic compression devices were placed on the lower extremities.

After the administration of intravenous antibiotics and *general endotracheal/regional* anesthesia, the entire abdomen and genitalia were prepped and draped in the standard sterile manner.

A time-out was completed, verifying the correct patient, surgical procedure, and positioning, prior to beginning the procedure.

The radiographic images were in the room.

An 18Fr urethral catheter was inserted into the bladder and filled with 200 ml sterile normal saline.

A midline abdominal incision was made from just below the umbilicus to the pubic symphysis. The subcutaneous tissue was incised with electrocautery, exposing the underlying rectus abdominis aponeurosis. This was incised at the linea alba and the rectus abdominis muscles separated at the midline and retracted laterally, taking care not to injure the underlying inferior epigastric vessels. A self-retaining retractor (e.g. Bookwalter, Omni-Tract, Balfour) was appropriately positioned to optimize exposure, using padding on each retractor blade.

The peritoneum was swept superiorly after incising the perivesical fat just below the peritoneal reflection, and two 2-0 chromic stay sutures were placed into the mid-anterior bladder wall. A 1 cm full-thickness vertical stab incision was made between these using electrocautery. The partially filled bladder was drained using suction. Allis clamps were placed on both edges of the cystotomy, which was extended cranially and caudally, exposing the entire bladder.

The urethral catheter was removed and the bladder was thoroughly inspected confirming the absence of any tumors or foreign bodies. The bladder wall was

*minimally/moderately/significantly/not* trabeculated, with a normal appearing mucosa. Both ureteral orifices were in the normal anatomic position with clear urinary efflux noted bilaterally. The diverticulum was identified on the (location) wall.

The *right/left* ureteral orifice was intubated with a *5Fr open-ended catheter/infant feeding tube*.

An index finger was placed within the mouth of the diverticulum and lifted anteriorly. With intravesical finger control, using blunt and sharp dissection, the diverticular neck was carefully mobilized extravasically. The dissection was continued circumferentially, freeing the diverticulum from the adjacent tissues. The neck of the diverticulum was completely transected and the specimen was removed and sent to pathology for evaluation. Meticulous hemostasis was achieved with electrocautery. The resulting rent in the bladder was closed in two layers with running 3-0 and 2-0 polyglactin (Vicryl) sutures on the mucosal and muscularis/adventitial layers, respectively.

The distal *right/left* ureter was noted to be intact and the *open-ended catheter/infant feeding tube* removed. A new 18Fr urethral catheter was inserted into the bladder and connected to a drainage bag.

The midline cystotomy was similarly closed in two layers with Vicryl sutures.

The patency of the repair was confirmed by irrigating the urethral catheter with 300 ml sterile normal saline.

***If a lymphadenectomy is performed:*** A bilateral pelvic lymph node dissection was performed beginning on the *left/right*. The iliac vessels were exposed from just above the common iliac bifurcation to the femoral canal. The ureters were identified anteriorly at the bifurcation of the external and internal iliac vessels and protected. The lymph nodes appeared *unremarkable/enlarged/matted* on palpation. The nodal dissection was started at the medial aspect of the *left/right* external iliac artery by incising the perivascular fibroareolar sheath. Using gentle medial traction, the obturator neurovascular bundle was identified posteriorly and preserved. The dissection was carried laterally to the genitofemoral nerve and medially to the ipsilateral ureter. The cranial and caudal limits of dissection were the common iliac bifurcation and femoral canal (node of Cloquet), respectively. Small vessels and lymphatic branches were fulgurated or ligated with surgical clips to maintain meticulous hemo- and lymphostasis. A large surgical clip was used to individually secure the distal and proximal extents of lymph node packet. The nodal packet was removed and sent to pathology for evaluation.

The contralateral lymph node dissection was performed in a similar manner and the nodal packet sent to pathology for evaluation.

Prior to closure, the operative field was inspected for bleeding or injury, and the pelvis was irrigated with warm sterile water. A surgical drain (e.g. Jackson-Pratt) was placed in the pelvis and brought out at the skin through a separate stab incision, where it was secured with a 2-0 silk suture.

The self-retaining retractor was removed and the abdominal incision was closed using a running 2-0 chromic to approximate the rectus muscles and 1-0 polydioxanone (PDS) for the rectus aponeurosis. 3-0 chromic sutures were used on Scarpa's fascia

and the skin approximated with a subcuticular 4-0 poliglecaprone (Monocryl) suture. A sterile dressing was applied.

At the end of the procedure, all counts were correct.

The patient tolerated the procedure well and was taken to the recovery room in satisfactory condition.

**Estimated blood loss:** Approximately \_\_\_\_\_ml

## 4

# Cystolithotomy

## Indications

- Select bladder stones (e.g. > 6 cm, hard consistency, multiple bladder stones, failed cystolithotripsy, stone(s) within a diverticulum, procedure performed in conjunction with an open prostatectomy or diverticulectomy)

## Essential Steps

- 1) Partially fill the bladder through a urethral catheter.
- 2) Expose the bladder, sweep the peritoneum superiorly, and make a vertical mid-anterior cystotomy.
- 3) Remove all stones and inspect the bladder.
- 4) Close the midline cystotomy in two layers with absorbable sutures.
- 5) Maintain a urethral catheter.

## Note these Variations

- Alternatively, an infraumbilical midline abdominal incision may be used.
- The use of a suprapubic tube and a drain are optional.

## Complications

- Bleeding
- Infection
- Urine leak/urinoma
- Urinary retention

## Template Operative Dictation

**Preoperative diagnosis:** Bladder calculus(i)

**Postoperative diagnosis:** Same

**Procedure:** Cystolithotomy

**Indications:** The patient is a \_\_\_\_\_ -year-old *male/female* with a \_\_\_\_\_ cm/multiple bladder stone(s) presenting for a cystolithotomy.

**Description of Procedure:** The indications, alternatives, benefits, and risks were discussed with the patient and informed consent was obtained.

The patient was brought onto the operating room table, positioned supine, and secured with a safety strap. All pressure points were carefully padded and pneumatic compression devices were placed on the lower extremities.

After the administration of intravenous antibiotics and *general/regional* anesthesia, the abdomen and genitalia were prepped and draped in the standard sterile manner.

A time-out was completed, verifying the correct patient, surgical procedure, and positioning, prior to beginning the procedure.

An 18Fr urethral catheter was inserted into the bladder and filled with 200 ml sterile normal saline.

An 8 cm longitudinal incision was made 2 cm above the pubic symphysis (*modified Pfannenstiel*). The subcutaneous tissue was incised with electrocautery, exposing the underlying rectus abdominis aponeurosis. This was incised at the linea alba and the rectus abdominis muscles separated at the midline and retracted laterally, taking care not to injure the underlying inferior epigastric vessels. A self-retaining retractor (e.g. Balfour) was appropriately positioned to optimize exposure, using padding on each retractor blade.

The perivesical fat was incised just below the peritoneal reflection and the peritoneum swept superiorly. Two, 2-0 chromic stay sutures were placed into the mid-anterior bladder wall. A 1 cm full-thickness vertical stab incision was made between these using electrocautery. The partially filled bladder was drained using suction and Allis clamps placed on both edges of the cystotomy, which was extended cranially and caudally for a total distance of 5 cm. The bladder stone(s) *was/were* visualized at the base, removed using Randall forceps and sent for chemical analysis. The bladder was thoroughly inspected confirming the absence of any tumors, foreign bodies, or diverticula. The bladder wall was *minimally/moderately/significantly/not* trabeculated, with a normal appearing mucosa. Both ureteral orifices were in the normal anatomic position with clear urinary efflux noted bilaterally.

The cystotomy was closed in two layers using 3-0 and 2-0 polyglactin (Vicryl) sutures on the mucosal and muscularis/adventitial layers, respectively. Meticulous hemostasis was achieved using electrocautery. The patency of the repair was confirmed by irrigating the urethral catheter with 300 ml sterile normal saline, and the catheter connected to a drainage bag. A surgical drain (e.g. Jackson-Pratt, 0.25 in. Penrose) was placed in the space of Retzius away from the cystotomy and brought out through a separate stab incision, where it was secured at the skin with a 2-0 silk suture. Prior to closure, the operative field was inspected and found to be intact without evidence of bleeding or injury.

The self-retaining retractor was removed and the abdominal incision closed using a running 2-0 chromic to approximate the rectus muscles and a running 1-0 polydioxanone (PDS) for the rectus aponeurosis. 3-0 chromic sutures were used on Scarpa's fascia and

the skin approximated with a subcuticular 4-0 poliglecaprone (Monocryl) suture. A sterile dressing was applied.

At the end of the procedure, all counts were correct.

The patient tolerated the procedure well and was taken to the recovery room in satisfactory condition.

**Estimated blood loss:** Approximately \_\_\_\_\_ml



## 5

### Enterovesical Fistula Repair (with Omental Flap)

#### Indications

- Enterovesical fistula

#### Essential Steps

- 1) Identify the fistulous area and separate the adherent enteric segment from the bladder.
- 2) Resect the diseased bowel and perform a functional end-to-end enteric anastomosis.
- 3) Debride the fistulous tract and close the bladder in two layers using absorbable sutures.
- 4) Cover the repair with an omental flap.
- 5) Place a drain and maintain a urethral catheter.

#### Note These Variations

- A preoperative bowel prep is optional.
- The enteric anastomosis can be hand sewn using a two-layer technique.
- A multistage procedure may be required, depending on the clinical situation.

#### Complications

- Bleeding
- Infection
- Ileus/bowel obstruction
- Bowel injury/leak
- Urine leak/urinoma
- Recurrent fistula

## Template Operative Dictation

**Preoperative diagnosis:** Enterovesical fistula

**Postoperative diagnosis:** Same

**Procedure:** Resection of enterovesical fistula

**Indication:** The patient is a \_\_\_\_ -year-old *male/female* presenting for resection of an enterovesical fistula.

**Description of Procedure:** The indications, alternatives, benefits, and risks were discussed with the patient and informed consent was obtained.

The patient was brought onto the operating room table, positioned supine and secured with a safety strap. All pressure points were carefully padded and pneumatic compression devices were placed on the lower extremities.

After the administration of intravenous antibiotics and general endotracheal anesthesia, the patient's entire abdomen was prepped and draped in the standard sterile manner.

A time-out was completed verifying the correct patient, surgical procedure, and positioning, prior to beginning the procedure.

A 20Fr urethral catheter was inserted into the bladder and connected to a drainage bag.

A midline abdominal incision was made starting just above the umbilicus and carried down to the pubic symphysis. The subcutaneous tissue was incised with electrocautery, exposing the underlying rectus abdominis aponeurosis. This was incised at the linea alba and the rectus abdominis muscles separated at the midline and retracted laterally, taking care not to injure the underlying inferior epigastric vessels.

The peritoneal cavity was entered sharply and several intestinal adhesions were carefully lysed, avoiding injury to the bowel. A self-retaining retractor (e.g. Bookwalter, Omni-Tract, Balfour) was appropriately positioned to optimize exposure, using padding on each retractor blade. The peritoneal contents were examined and there was no evidence of any inflammatory disease outside of the pelvis, where the *sigmoid/descending/ascending colon//ileum* was noted to be adherent to the *dome/posterior wall* of the urinary bladder. The fistulous tract was identified and the adherent bowel segment separated from the bladder wall using sharp and blunt dissection.

The diseased enteric segment measured approximately \_\_\_\_ cm. The mesentery on both sides of the diseased segment was incised using an electrothermal bipolar tissue sealing device (LigaSure), and the bowel transected using a GIA60 stapler. The entire specimen was sent to pathology for evaluation.

The continuity of the bowel was restored with a stapled anastomosis as follows: The antimesenteric corners of the proximal and distal *colonic/ileal* segments were identified and a small segment of tissue was resected off each end of the stapled suture lines. One limb of the GIA60 stapler was inserted into the proximal and the other into the distal segment with care taken not to injure the bowel mesentery. The bowel segments were rotated ensuring that the antimesenteric walls faced each other prior to firing the stapler. Four small clamps were then placed on the ends of the transected bowel. The two clamps on the lines of the original bowel transection were held together, while the others were spread apart, creating a wide opening. A TA55 stapler was used to complete the functional end-to-end *colonic/ileal* anastomosis. The staple line was checked, confirming its integrity, and additionally reinforced with interrupted 3-0 silk sutures. The mesenteric window was closed with a running 4-0 chromic suture to avoid internal herniation. Meticulous hemostasis was obtained throughout the procedure.

Having completed the bowel resection and anastomosis, attention was focused on the bladder. The fistulous tract was thoroughly debrided and the bladder inspected. There was no additional intravesical pathology, and both ureters were identified with clear efflux seen bilaterally.

The bladder wall was closed in two layers using 3-0 and 2-0 polyglactin (Vicryl) sutures on the mucosal and muscularis/adventitial layers, respectively. The patency of the repair was confirmed by irrigating the urethral catheter with 300ml sterile normal saline.

An omental flap was created by mobilizing the greater omentum off the stomach, preserving the right gastroepiploic artery. The left gastroepiploic artery was ligated using 2-0 silk ties and divided close to its origin at the splenic artery. The short gastric arteries were individually ligated with 3-0 silk ties and the omentum was dissected off the greater gastric curvature. The well-vascularized omental flap was brought down to the pelvis to cover the cystorrhaphy and sutured to the bladder wall with interrupted 3-0 chromic sutures.

A surgical drain (e.g. Jackson-Pratt, 0.25 in. Penrose) was placed in the space of Retzius and brought out through a separate cutaneous incision where it was secured at the skin with a 2-0 silk suture. The wound was irrigated with warm sterile saline and hemostasis again confirmed. Prior to closure, the abdominal vessels and visceral organs were inspected and found to be intact without evidence of devascularization or injury.

The self-retaining retractor was removed and the abdominal incision was closed using a running 2-0 chromic to approximate the rectus muscles and 1-0 polydioxanone (PDS) for the rectus aponeurosis. 3-0 chromic sutures were used on Scarpa's fascia and the skin approximated with a subcuticular 4-0 poliglecaprone (Monocryl) suture. A sterile dressing was applied.

At the end of the procedure, all counts were correct.

The patient tolerated the procedure well and was taken to the recovery room in satisfactory condition.

**Estimated blood loss:** Approximately \_\_\_\_\_ml.