This month’s stumper

A 71-year-old man comes to the physician because of problems with urination. He reports that over the past two weeks his urine stream has become weaker. Over the last 24 hours, he has been unable to urinate at all and is becoming extremely uncomfortable. There is no history of dysuria, hematuria, fever, or chills. He has a history of benign prostatic hyperplasia (BPH), for which he takes tamsulosin.

He takes diltiazem for hypertension and had a cholecystectomy 20 years ago. He denies any use of over-the-counter medications. His temperature is 37.4 ºC (99.3 ºF), pulse is 86 beats per minute, and blood pressure is 164/88 mmHg. He is in moderate distress. The abdomen is soft with lower abdominal distension and suprapubic discomfort on palpation and percussion. On digital rectal examination, the prostate is estimated to be 50 grams in size, nontender and without nodularity.

When an attempt is made to place a Foley urinary catheter, resistance is met and no urine comes out. Blood then begins to ooze from the urethral meatus. Which of the following is the best next step in management?

A. Insert bilateral percutaneous nephrostomy tubes.
B. Perform retrograde urethrogram.
C. Perform suprapubic tube placement.

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D. Plan emergency ileal conduit creation.

E. Schedule emergent transurethral resection of the prostate.

The correct answer is C.

Kaplan Medical explains why

This patient has urinary retention with bladder outlet obstruction, the etiology of which is most likely his benign prostatic hyperplasia. Bladder drainage will relieve the patient's discomfort and prevent renal damage. Of the options provided, the least invasive and most expeditious choice is suprapubic (SP) tube placement, which can be achieved using a simple bedside percutaneous technique under ultrasound guidance.
The fact that the patient's bladder is distended will make the procedure easier. Once the bladder is located, a spinal needle is inserted 4–5 cm (about two finger-breathths) above the pubic symphysis under local anesthesia to confirm bladder depth and location. The catheter is then inserted in the same location.

Why the other answers are wrong

**Choice A:** Percutaneous nephrostomy tubes are used to manage renal failure and bilateral hydronephrosis. Although this patient may have hydronephrosis, these tubes will only decompress the kidneys rather than the distended bladder, the source of this patient's discomfort.

**Choice B:** A retrograde urethrogram involves contrast injection into the urethra to identify urethral anatomy. Although the test may identify this patient's blockage, it is only diagnostic, not therapeutic.

**Choice D:** An ileal conduit is performed by isolating a segment of the ileum and surgically inserting the ureters into this conduit at its proximal end. The distal aspect of the conduit is used to create a stoma on the abdominal wall. This procedure is most commonly performed after radical cystectomy for bladder cancer. It is not performed for the management of urinary retention.

**Choice E:** Transurethral resection of the prostate (TURP) was a very common procedure for BPH management before effective medical therapies were developed. Medical therapies include alpha-blockers, which he is already receiving, and inhibitors of dihydrotestosterone, like finasteride or dutasteride, which have not been tried for this patient. Note that the latter group of medications could take months to achieve their intended effects. Finally, if a TURP were to be performed, it would not be done on an emergent basis.

Tips to remember

- Patients who have BPH are susceptible to urinary obstruction by the enlarged prostate compressing the prostatic portion of the urethra.
- Complete urinary obstruction is a urologic emergency.
- When a Foley urinary catheter cannot be placed, bladder decompression with a SP tube is recommended.
- Bladder decompression may prevent development of renal insufficiency or renal failure from urine reflux to the kidneys and hydronephrosis.

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