Continuous Bladder Irrigation

Introduction
Continuous bladder irrigation, or CBI, is the infusion of a sterile solution into the urinary bladder.

The purpose of CBI is to prevent the formation of blood clots after surgery. CBI can also help urine flow normally.

This reference summary explains CBI. It discusses the anatomy of the urinary system, what to expect during CBI and risks and complications of the procedure.

The Urinary System
The urinary tract helps your body remove wastes and extra water. The urinary tract includes:
- Two kidneys.
- Two ureters.
- A urinary bladder.
- A urethra.

The kidneys are a pair of organs. Each kidney is about the size of a fist. They are located toward the middle of the back and below the ribs, one on each side of the spine. The kidneys filter the blood to remove waste products.

Urine travels from the kidneys down two narrow tubes to the bladder. These tubes are called the ureters. The bladder is a balloon-like organ that stores urine. Urine is emptied through the urethra, which is a tube at the bottom of the bladder. When the bladder empties, a muscle called the sphincter relaxes and urine flows out of the body through the urethra.
Reasons for CBI
Your health care provider may recommend continuous bladder irrigation for several reasons. CBI may be done after prostate or bladder surgery. It can prevent urinary tract obstruction and urination problems. CBI can also flush out small blood clots that form after surgery.

CBI can dissolve bladder calculi, or bladder stones. Bladder stones are masses of minerals that form in your bladder. Small bladder stones sometimes pass on their own. But you may need to have others removed. Left untreated, bladder stones can cause infections and other complications.

In some cases, CBI may be used to treat irritated, inflamed or infected bladder lining. The procedure can be done to administer medicine to the bladder.

Procedure
Before continuous bladder irrigation, a catheter will be placed in your bladder.

CBI uses a three-way system with a triple-lumen catheter. A lumen is a port that connects to the catheter and lies outside the body. A triple-lumen catheter has three separate ports.

Each of the three lumens has a specific purpose:
- One lumen is used to drain urine.
- One lumen is used to inflate the catheter balloon.
- One lumen carries the irrigation solution to the bladder.

Your health care provider will use an irrigation flask for CBI. An irrigation flask is often a bag of sterile saline. The solution may also contain medicine in some cases. The irrigation flask is connected to one of the lumens of the catheter so the saline solution can run continuously through the bladder. The irrigation flask is hung on an IV pole and prepped for use. The irrigation lumen is cleansed with an alcohol swab. The irrigation tubing is then attached to the irrigation lumen.
Your health care provider will first remove the old drainage bag from the catheter lumen. He or she will measure the amount of urine in the drainage bag before emptying it. A new catheter drainage bag is attached to one of the lumens.

Your health care provider will make sure the catheter is not blocked and that urine can drain freely into the drainage bag. When urine starts to drain, your health care provider will start the bladder irrigation by unclamping the irrigation tubing.

During CBI, your health care provider will monitor:

- The color of your urine.
- The level of hematuria, or blood, in your urine.
- Your urine output.

Tell your health care provider right away if you feel any pain, discomfort or anxiety during the procedure. CBI treatments may take a few days.

**Risks and Complications**

Continuous bladder irrigation is a safe procedure. But, like any procedure, there are risks.

Potential problems caused by CBI include:

- Catheter blockage.
- Discomfort during the procedure.
- Urinary tract infections.

A urinary tract infection, or UTI, is an infection in any part of your urinary system. It may cause pain or a burning sensation when urinating. UTIs happen when bacteria enter the urinary tract.

If the catheter becomes blocked, manual bladder irrigation may be needed. Manual bladder irrigation involves flushing a urinary catheter by hand with a catheter-tipped syringe and normal saline. In some cases, your catheter may need to be replaced.
Discomfort during CBI may be caused by urinary retention, or the inability to empty the bladder. If this problem is not corrected, you may experience symptoms including:

- Fainting.
- Fast heartbeat.
- Low blood pressure.
- Sweating.

More serious complications of urinary retention may include:

- Organ damage.
- Death.

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