

Section: Division of Nursing
Approval: _____

PROCEDURE

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HACKETTSTOWN REGIONAL MEDICAL CENTER

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OR
(Scope)

TITLE: MICROVASIVE UROLOGY LITHOCLAST, OPERATION OF

PURPOSE: To outline procedure to delineate the staff's role in operating the Microvasive Urology Lithoclast.

SUPPORTIVE DATA: The Microvasive Urology Lithoclast System is designed to be used in conjunction with cystoscopies and ureteroscopies to blast both bladder and urethral stones from removal. The system utilized a wave shock generated by a piston under compressed air to break up a stone or to pulverize the stone for easy passage and removal.

- EQUIPMENT LIST:**
1. Microvasive Urology Lithoclast unit (located in OR III sub-sterile room)
 2. Lithoclast handpieces sterilized
 3. Lithoclast probes (probes must be sterilized if not open from original package on table)
 4. Nitrogen or compressed air tank.

CONTENT:

PROCEDURE:

1. Connect Lithoclast Unit to nitrogen or compressed air source to 70 psi, or as directed by the physician.
2. Plug in Lithoclast Unit to power source.
3. Turn on Lithoclast Unit and set bar pressure 1.5, or as directed by the physician.
4. Start with unit on single pulse and move to multiple pulse as directed by surgeon.
5. Unscrew cap from sterile handpiece and set cap aside on sterile field.
6. Screw sterile probe into handpiece and tighten snug.
7. Hand off end of handpiece to circulator and insert tube into face of unit.
8. Place foot pedal with cover over it at surgeon's feet.

KEYPOINTS:

Unit should be set at 1.5 bar pressure at all times.

Starting on multiple may cause the stone to move up ureter.

Do not throw cap out, as cap must be replaced on hand unit at end of procedure for cleaning and sterilization.

Pressure should be applied to center of pedal.

9. The surgeon will insert desired size probe through scope and place probe directly on stone, trapping against the wall of ureter or bladder. Tip of probe should be seen at end of scope.
10. The surgeon will step on foot pedal to blast stone.
11. Move setting to multiple pulses and repeat step 10 as required by the surgeon.
12. After procedure completed, remove probe from handle and place cap of handle back onto handpiece snugly. The air source should be turned off and bleed the unit of remaining air.
13. Unplug handpiece from unit and send probe with handpiece for cleaning. They will be returned unsterilized and must be autoclaved prior to each use. The probe may be used up to 5 times before it is to be discarded. Staff will mark the probe each time it is sterilized.
14. The probe and handpiece should be autoclaved for a 10-minute flash cycle prior to each use. Mark probe at base with a permanent marker before each sterilization cycle. Be sure cap is screwed snugly onto handpiece prior to autoclaving. Take care not to allow moisture to enter the handpiece.

Reference: Microvasive Swiss Lithoclast Instruction Manual and Quick Reference Guide 435234-01 Rev.B.

MICROVASIVE UROLOGY LITHOCLAST QUICK REFERENCE

PRIOR TO THE PROCEDURE:

1. Set nitrogen or compressed air source to % PSI.
2. Start with 1.5 bar of pressure (on the unit) increasing as needed to 2.5 bar.
3. Start on single pulse and move to multiple pulse as needed.
4. Cover foot pedal to keep clean.
5. Sterilize probes and handpiece:
Autoclave at 132 degrees for 10 minutes, 4 minutes dry time.
Silicone tubing must be tightly attached to the handpiece at all times.
Options:
 - Place tan sterilization cap tightly on handpiece and sterilize alongside probe (disassembled).
 - Keep handpiece and probe fully assembled – sterilize as one piece (assembled).
6. After sterilization, check the probes (especially under tan screw cap and silicone piece) and tubing for moisture and dry accordingly.
7. Have both handpieces assembled (probe is inserted and screwed on tightly) and on sterile field at start of case.

PROBE SIZES

*2.5 - 0.8mm – primarily for ureteroscopy	840-208
*3.0 – 1.0 mm – primarily for ureteroscopy	840-210
*4.8 – 1.6mm – primarily for bladder stones	840-214
*6.0 – 2.0 mm – primarily for Percutaneous Nephrolithotomy	840-220

REORDER

Sizes of probes written in mm on the end of each probe – you must move the tan screw cap and silicone tube to see size.

DURING THE PROCEDURE

1. Insert probe through scope – should see tip of probe appear at end of scope.
2. Place probe **directly** on stone, trapping against the ureteral wall if needed.
3. Step on foot pedal to **BLAST** stone.

AFTER THE PROCEDURE

1. Use water and an enzymatic detergent to **clean** the assemble handpiece, probe and silicone tube. Use of saline **is not** recommended. Do not disassemble the Lithoclast handpiece, probe and silicone tube for cleaning. Under no circumstances should water or moisture enter the interior of handpiece because moisture may inhibit free movement of the projectile. If moisture does penetrate the handpiece, the handpiece must be disassembled and each part inside wiped dry with a sterile gauze pad.