

## Lymphatic Embolization For Postoperative Groin Wound Leaks: How To Do It And How Effective Is It

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## Disclosures

- Medical Advisory Board
  - Auxetics
  - Boston Scientific
  - Medtronic
- Stock Shareholder
  - Analytics 4 Life
  - Auxetics
  - Calgary Scientific
  - Cohesic
  - Harmonic Medical
  - Ikomed Medical
  - Innovere Medical
  - Zymeworks



**The art of medicine consists of amusing the patient while nature cures the disease.**

- Voltaire

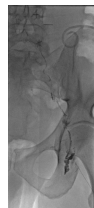
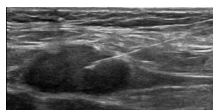
## Lymphangiography



- Took hours
- Hurt
- Failure / swearing common
- Only 1 person / city wanted to do

## Inguinal Lymph Node Puncture For Lymphangiography

- 22 – 25 g needle
- Ultrasound guidance
- Inject lipiodol 1 cc q 6 minutes



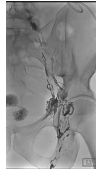
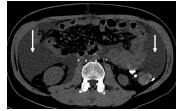
Nadolski, Hkin, JVIR 2012; 23: 613-616

## Manifestations of Operative Lymphatic Injury

- Lymphatic drainage at the wound site
- Chylous ascites
- Chylous fistula
- Chylothorax
- Chylomediastinum
- Chylopericardium
- Lymphocele
- Persistent lymphorrhea
- Secondary lymphedema

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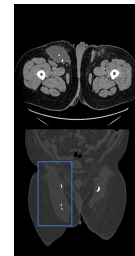


Manifestations of Operative Lymphatic Injury

- Lymphatic drainage at the wound site
- Chylous ascites
- Chylous fistula
- Chylothorax
- Chylomediastinum
- Chylopericardium
- Focal collections (lymphoceles)
- Persistent lymphorrhea
- Secondary lymphedema

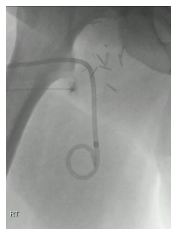
38 yr old man. Penile cancer

- Penectomy and inguinal lymph node dissection
- 2 weeks post bilateral groin collections R>L
  - Percutaneous drainage
- 4 months draining 70 -100 cc lymph daily and recurrent infections



22 x 10 x 6 cm collection right groin

38 yr old man. Post-op lymphatic inguinal collection



- As soon as see contrast going to collection
- Glue 1:2 1.5 cc
  - Until extravasation around needle

38 yr old man. 4 months of persistent high output post surgery



After 1.5 cc 1:3 glue

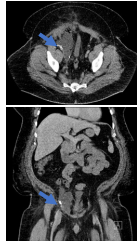


RT GROIN TRANS

- Pre - 22 x 10 x 6 cm
- 8 weeks - drainage < 5 cc / day
- Catheter pulled
- 4 months - 5.7 x 3.2 x 3 cm mass
- Minimal fluid component

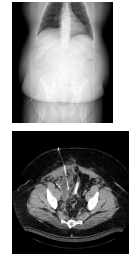
50 yr old contractor

- Festive body habitus
- BMI 36
- Non-seminoma testicular Ca
- Right pelvic lymph node resection
- 14.7 x 11.6 x 4.2 cm collection



50 yr old man – post pelvic l.n. dissection

- 8.5 Fr drain inserted
- Drains 120 – 280 cc lymph / day 1 month



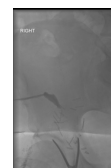
Glue Embolization

- 2.5 cc 1:4 glue : lipiodol
- Pain in l.n.
- Resolved within minutes



50 yr old contractor – pelvic lymphatic collection

- Gradual daily decrease in output
- 3 weeks -> output < 5 cc / day
- Drain removed



Sinogram

Lymphatic Embolization For Pelvic Collections

- 9 patients - lymphatic embolization for pelvic lymphocele after radical prostatectomy with pelvic l.n. dissection
- Glue embolization direct puncture closest upstream lymph node or lymphopseudoaneurysm
- 3 patients repeat embolization
- Technical and clinical success - 100%
- Median time to resolution was 7 days (range 2-19)
- No recurrence

J Cardiovasc Intervent Radiol. 2019 Jun;42(6):873-879. doi: 10.1007/s00270-019-02209-6. Epub 2019 Mar 27.

Lymphangiography and Lymphatic Embolization for the Management of Pelvic Lymphocele After Radical Prostatectomy in Prostatic Cancer

Heo JH, Kim J, Kim SH, Kim T, Jung H, Kim D, Seok Y, Kim H, Woo J, Yoo J, Yang Y, Cho J, Park H

**BRIEF REPORT**

**Intranodal Glue Embolization for the Management of Postsurgical Groin Lymphocele and Lymphorrhoea**  
 Amanda R. Smolok, MD, PhD, Gregory Napolitano, MD, and Maxim Miron, MD

- 10 patients with groin lymphatic leak
- Intranodal injection 1:3 NBCA
- Mean volume 1 mL
- Clinical success rate 80%
- Median time to resolution 7 days

J Vasc Interv Radiol 2018; 29:1462–1465

Conclusion - Lymphatic Embolization For  
Postoperative Pelvic and Groin Collections

- Safe and effective
- Learning curve
- Direct lymph node injection
- Patience essential
  - During procedure
  - Post embolization

