

Inguinal Lymph Node to Vein Anastomosis- ‘The Cleveland Clinic Experience and Technical Refinements’

Sonia K Pandey, Elizabeth A. Bailey, Wei F Chen

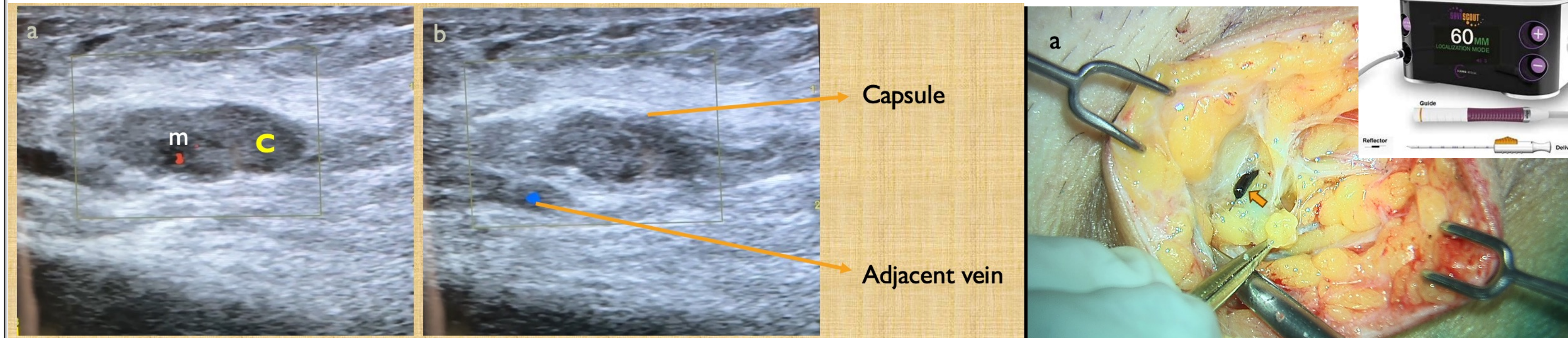
Department of Plastic Surgery, Cleveland Clinic Foundation, Cleveland

Background

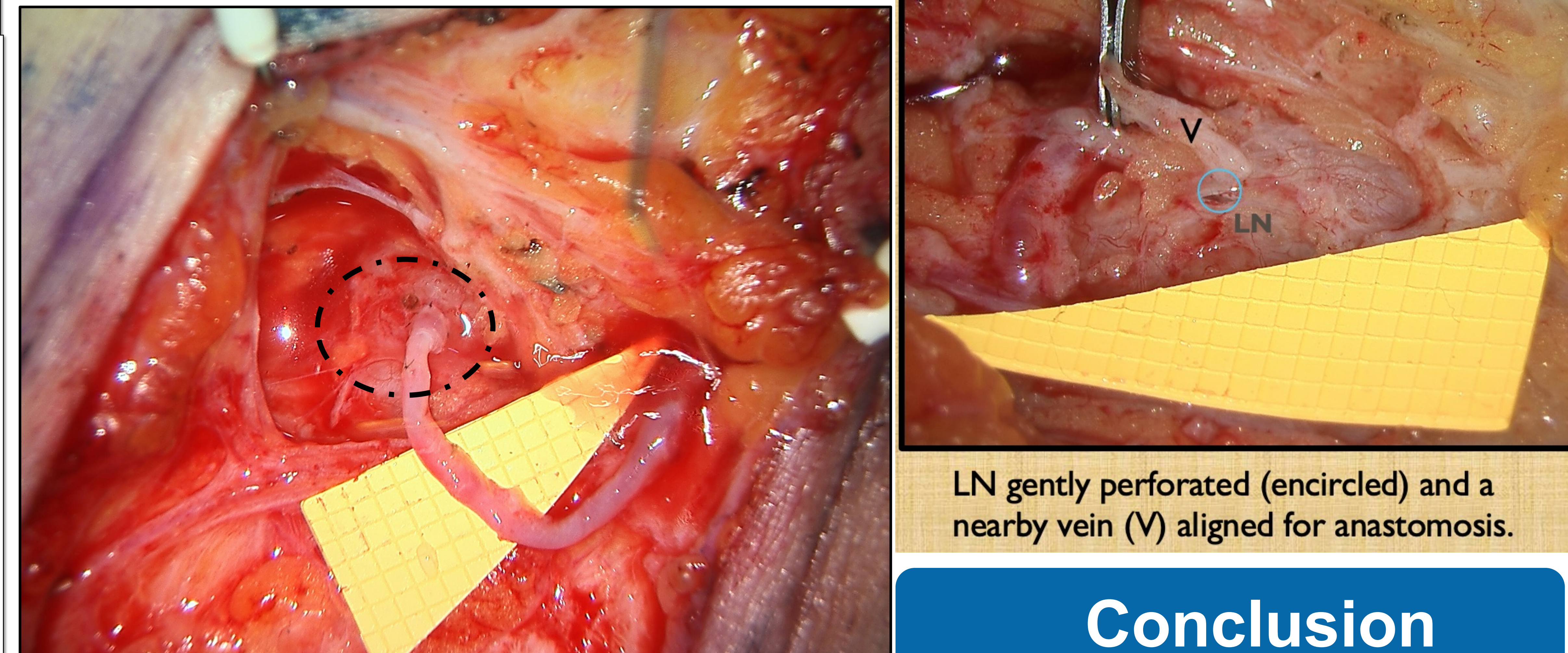
- A lymph node to vein anastomosis (LNVA) provides a strategic bypass for lymph incoming from multiple lymphatic channels, using a single connection.
- Successfully locating a suitable lymph node and vein in the groin, and performing the anastomosis without additional lymphatic damage, seems crucial for the procedure's success.

Methods

- Charts of patients who underwent LNVA at our institute, between September 2022 and September 2023 were reviewed.
- Demographics, indications, and procedural strategies were analysed.
- Postoperative outcomes were assessed using patient history, clinical examination, bioimpedance and with indocyanine green (ICG) lymphography in both legs.



Capsule, cortex (C), hypoechoic medulla (m), and hilar vasculature seen



LN gently perforated (encircled) and a nearby vein (V) aligned for anastomosis.

Conclusion

Our systematic preoperative and operative strategies have streamlined safe and reproducible execution of LNVA with encouraging early results.

Results

- Nineteen patients (11 females, 8 males; age 14-68 years) underwent 18 LNVA procedures.
- Indications included genital/lower truncal swelling (10/19), prior leg LVA (3/19), or prior leg liposuction (6/19).
- LNVA was performed alone (6/18), or with simultaneous LVA (8/18) or liposuction (4/18).
- Groin ultrasound, indocyanine green (ICG), isosulphan blue injections, Savi Scout radar system and vein finder were used for lymph nodes and veins mapping.
- Lymph node size, shape, echotexture, hilar blood flow and ICG flow direction guided target node selection.
- Average LN largest dimension 1.3 ± 0.6 cm
- Average time for skin incision to LN exposure was 39 ± 15 mins.
- Brisk lymph fluid egress was seen in 8/18 limbs. In 1 limb plan was converted to LVA in the groin due to no suitable lymph nodes.
- Twelve patients have demonstrated clinical improvement while 5 reported no change.