LOWER EXTREMITY VENOUS REFLUX STUDY (ELVT) WORKUP

Patient Prep (recommended):

- None

Survey:

- Perform a real time survey of the Lower Extremity Venous System with attention to Common Femoral Vein (CFV), Femoral Vein (proximal and mid), Popliteal Vein (PV), Greater Saphenous Vein (GSV) with junction of CFV, Greater Saphenous Vein (GSV) (proximal, mid-thigh, knee and mid-calf), Lesser Saphenous Vein (LSV) (proximal and mid). Evaluate any Branches off Greater Saphenous Vein and Lesser Saphenous Vein noted.
- Limitations with images should be documented.

Image Documentation:

- Each image must be labeled with the patient's full name, medical record number, accession number, initials of the imaging technologist, organ/area identification, scanning plane and patient orientation if different from supine.

General Procedure Description:

- The patient needs to be in the upright position. If patient is not able to stand, patient should be tilted upright as much as possible.
- The Right (RT) or Left (LT) side needs to be documented on each image with area of vessel noted.
- The venous system will be evaluated for augmentation. The image will need to have the word augmentation (aug) on the image.
- The venous system will be evaluated for compression. Utilize dual screen, and the image will need to have the word will compression (w comp) on the image.
- The venous system will be evaluated for reflux and measure the time of reflux on the image. Augmentation and/or Valsalva should be utilized to evaluate for Reflux.
- If the vessel is abnormal the correct labeling needs to be on the image.

VENOUS SYSTEM

- Longitudinal Color images.
    - Common Femoral Vein (CFV).
    - Femoral Vein (proximal, and mid).
    - Popliteal Vein (PV).
    - Greater Saphenous Vein (GSV) at junction with Common Femoral Vein (CFV).
    - Greater Saphenous Vein (GSV) at proximal, mid-thigh, knee and mid-calf.
    - Lesser Saphenous Vein (LSV) at proximal and mid.
    - Any Branch noted off Greater Saphenous Vein (GSV).
    - Any Branch noted off Lesser Saphenous Vein (LSV).

- Longitudinal Color images with Spectral Doppler Waveform to evaluate for Reflux. Measure the time of reflux on the image. Reflux is defined as 500 msec (0.5 sec) or greater of reversal flow. Augmentation and/or Valsalva should be utilized to evaluate for reflux.
    - Common Femoral Vein (CFV)2.
    - Femoral Vein (proximal, and mid).
    - Popliteal Vein (PV).
    - Greater Saphenous Vein (GSV) at junction with Common Femoral Vein (CFV).
    - Greater Saphenous Vein (GSV) at proximal, mid-thigh, knee and mid-calf.
    - Lesser Saphenous Vein (LSV) at proximal and mid.
    - Any Branch noted off Greater Saphenous Vein (GSV).
    - Any Branch noted off Lesser Saphenous Vein (LSV).

- Transverse Compression with grayscale (utilize dual screen with compression on the other screen where the vessel is compressed.

    - Common Femoral Vein (CFV).
    - Greater Saphenous Vein (GSV) at junction with Common Femoral Vein (CFV).
    - Femoral Vein (proximal, and mid).
    - Popliteal Vein (PV).

- In **TRANSVERSE**, measure the width (side to side, not top to bottom) of the vessel.

    - Greater Saphenous Vein (GSV) at junction of common Femoral Vein (CFV)
    - Greater Saphenous Vein (GSV) at proximal, mid-thigh, knee and mid-calf.
    - Lesser Saphenous Vein (LSV) at proximal and mid.
    - Any Branch noted off Greater Saphenous Vein (GSV).
    - Any Branch noted off Lesser Saphenous Vein (LSV).
    - If Great Saphenous Vein and/or Lesser Saphenous Vein is occluded, provide image with and without compression. Also provide an image in longitudinal with no color flow.

- **WORKSHEET**

    - Complete Worksheet.
    - Draw GSV and LSV on the worksheet.
    - Draw any branches off GSV and LSV on the worksheet.
    - Adjacent to a branch, put + if reflux and put – if no reflux.
    - If a branch has reflux (+), also put the time of the reflux. Ex: 520 msec (0.52sec).
    - Adjacent to branch, put size of branch (width measurement).