

LOWER EXTREMITY VENOUS REFLUX STUDY (ELVT) - POST

Patient Prep:

- 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 the 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 or semi-upright position for the exam.
- 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. 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 reflux is not noted in the Greater Saphenous Vein (GSV) at the junction and/or Proximal GSV but is noted in the Greater Saphenous Vein (GSV) distal to these areas, stand patient upright (no tilt) and reevaluate the Greater Saphenous Vein (GSV) at Junction and Proximal GSV. Only stand the patient upright if the patient can stand upright safely. Make sure it is documented on the image and worksheet that the patient was standing upright.
- If the vessel is abnormal the correct labeling needs to be on the image.
- Post ELVT the Greater Saphenous Vein (GSV), Lesser Saphenous Vein (LSV) and a branch off either vessel of GSV and LSV that is occluded, utilize dual screen and put occluded on the image. If vessel only partial compresses, use part comp. If the vessel does compress, note comp on the screen.
- As time goes on, the occluded vessels become difficult to visualize. If the Greater Saphenous Vein (GSV), Lesser Saphenous Vein (LSV) and a branch off either vessel of GSV and LSV is not visualized, put non vis on the image and worksheet.

VENOUS SYSTEM

- Longitudinal Color images of vessels.
 - 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 and 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)
 - 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 (comp) noted on the screen where the vessel is compressed. If vessel only partial compresses, use part comp. If the vessel does not comp, use no comp.
 - 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, utilize dual screen, with occluded on screen. If vessel only partial compresses, note part comp. If the vessel compresses, note comp on the screen.
 - 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. Ex: 520 msec (0.52sec).
- Adjacent to the branch, put the size of the branch.

Post ELVT the Greater Saphenous Vein (GSV), Lesser Saphenous Vein (LSV) and a branch off either vessel of GSV and LSV that is occluded, utilize dual screen and put occluded on the image. If vessel only partial compresses, use part comp. If the vessel does compress, note comp on the screen. If the vessel is occluded, note on the worksheet occluded.

As time goes on, the occluded vessels become difficult to visualize. If the Greater Saphenous Vein (GSV), Lesser Saphenous Vein (LSV) and a branch off either vessel of GSV and LSV are not visualized, put non vis on the image and the worksheet.