

6th ANNUAL Venous Symposium New York

Segmental GSV reflux

THE MOST INTERACTIVE VENOUS MEETING IN THE WORLD

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History of presentation

A 43 year old female presented with right lower extremity varicose veins and swelling. She had symptoms of aching, heaviness and tiredness in the right leg.



- **Past Medical History**
 - None
- **Past Surgical History**
 - Left ankle surgery 2010
- **Physical exam**
 - Arterial: Normal
 - Venous: The veins were apparent and palpable in the upper medial calf. Reticular and spider veins were seen in the medial thigh, posterolateral thigh and popliteal fossa.

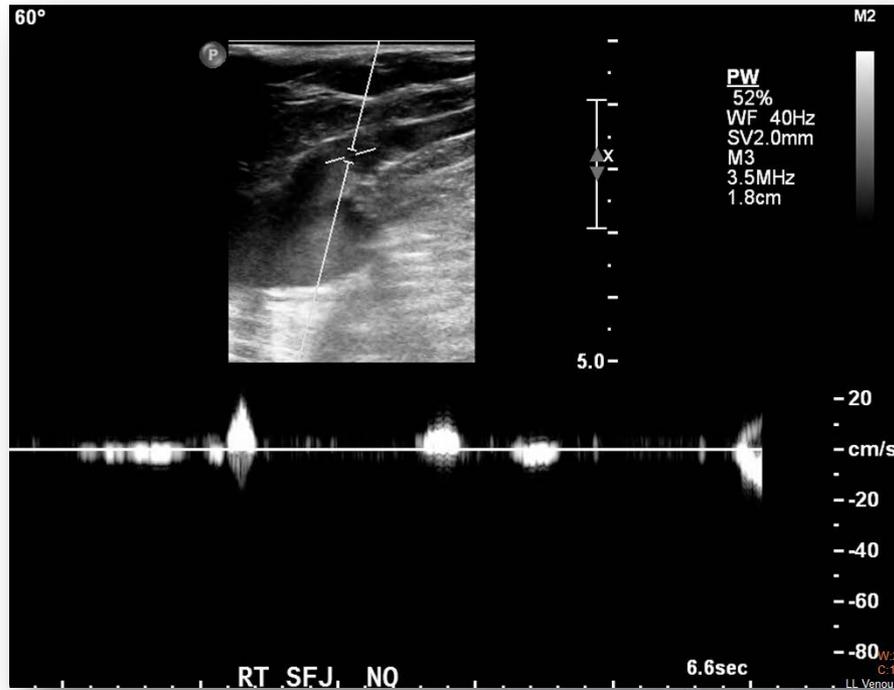


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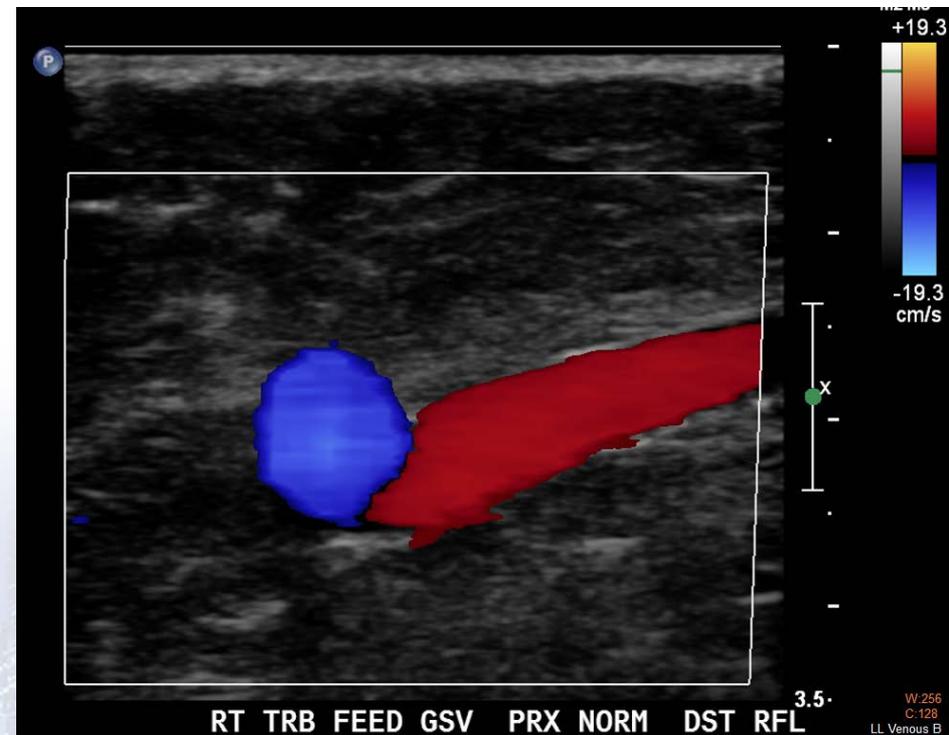
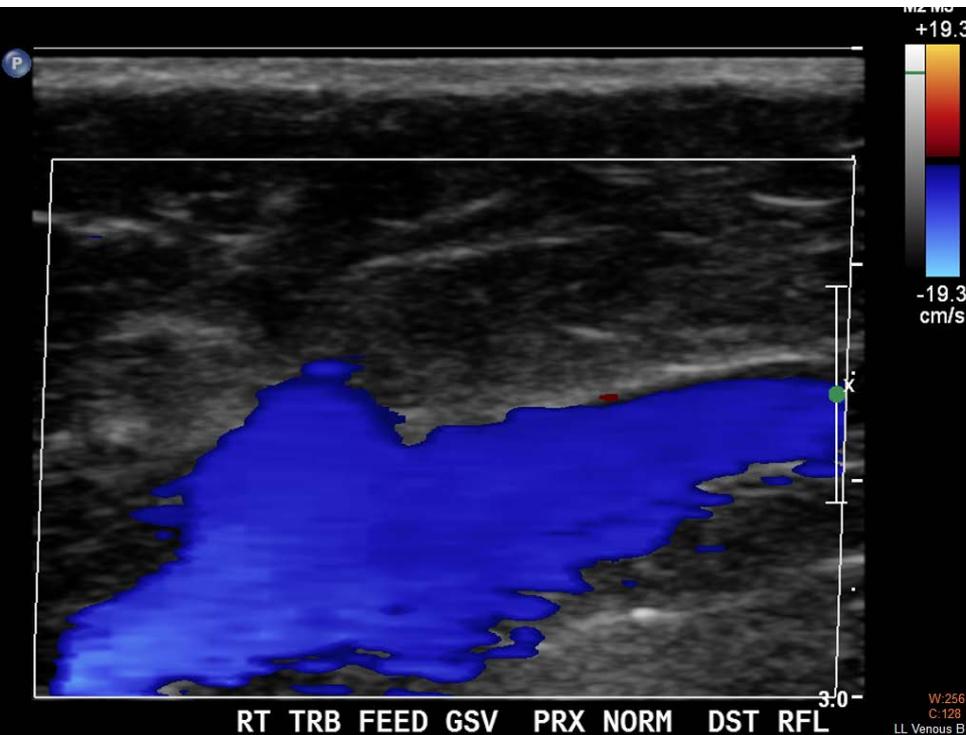
APRIL 16 - 18, 2015

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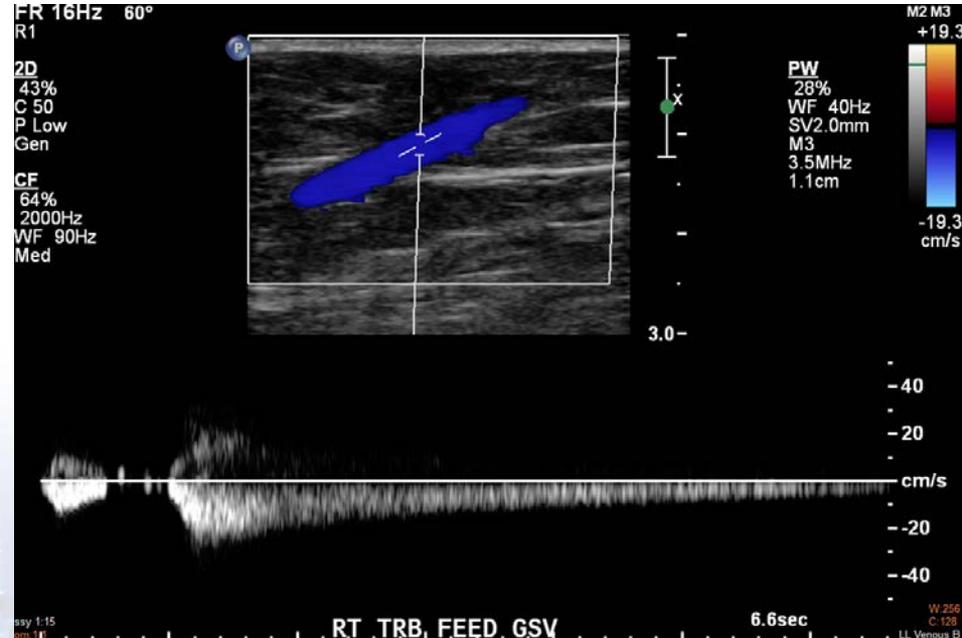




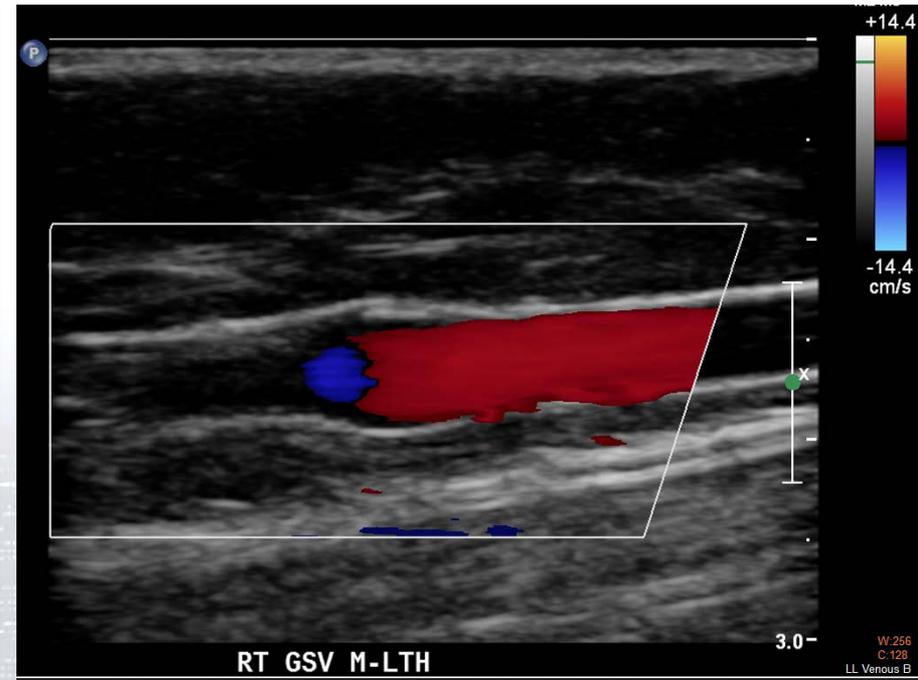
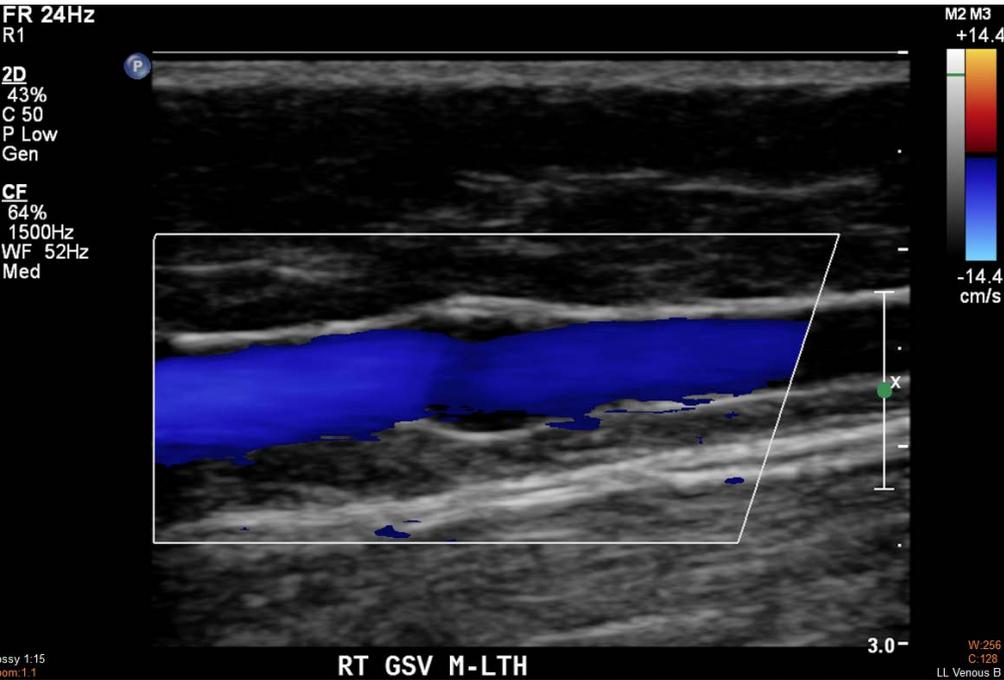
SFJ and GSV from the upper thigh to mid-thigh were normal.



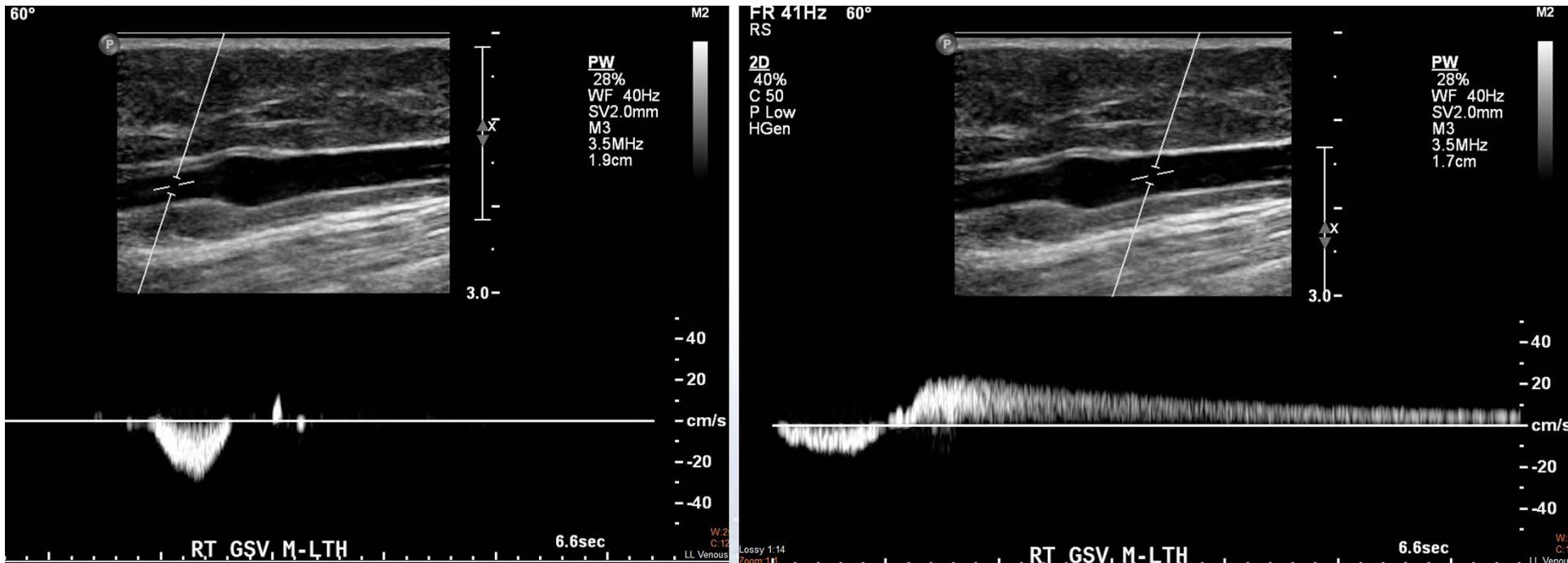
The GSV from mid to lower thigh had reflux. The tributary uniting with the GSV brings flow to the normal proximal segment and to the refluxing one distally. This can explain of how a refluxing GSV can get additional flow and have prolonged reflux after the release of the distal compression.



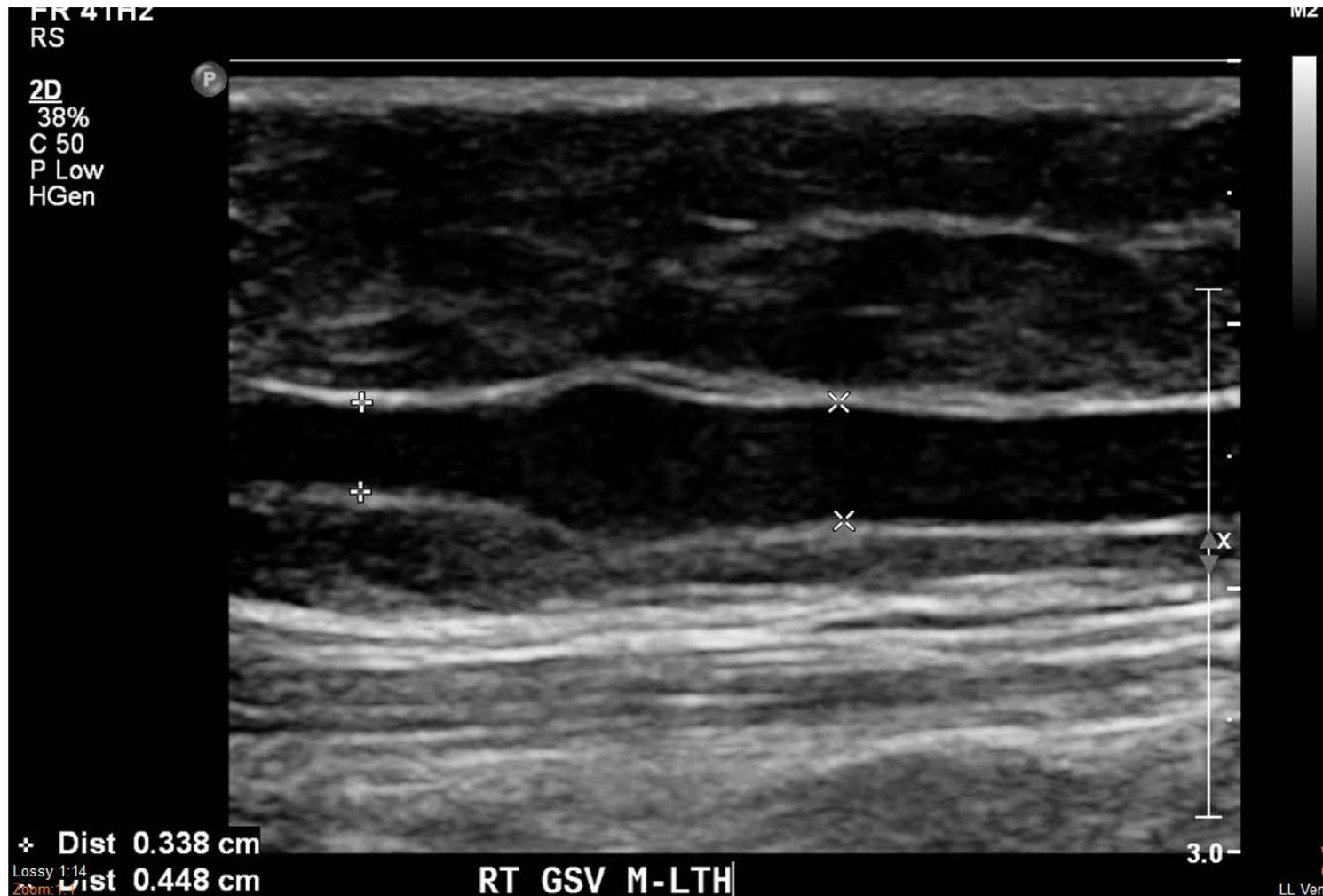
The tributary uniting with the GSV is dilated but has no reflux. Its diameter measured from 4.1mm to 7.9mm. During calf compression flow is cephalad and at the release of the compression flow continues in the same direction.



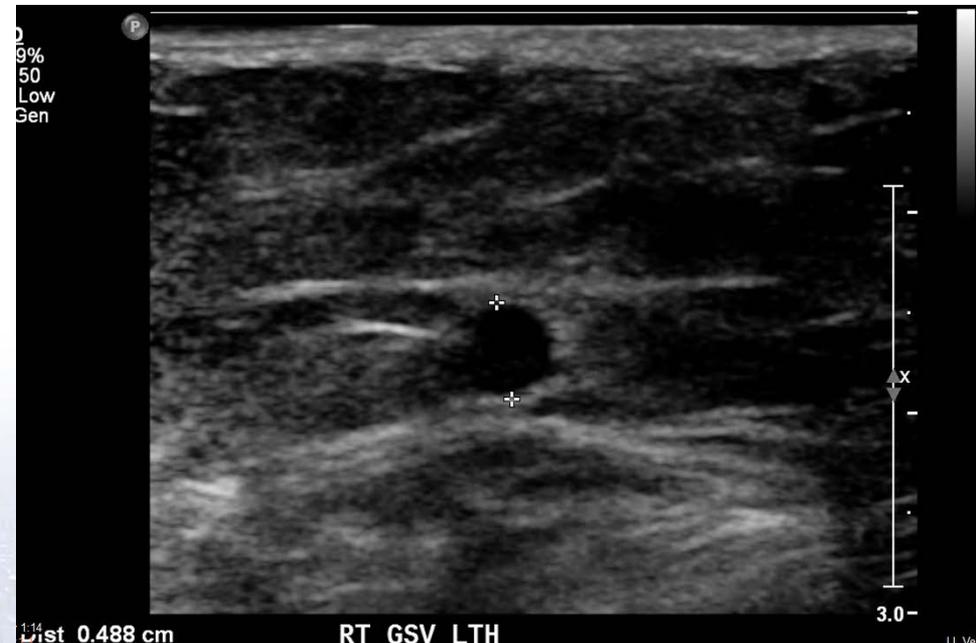
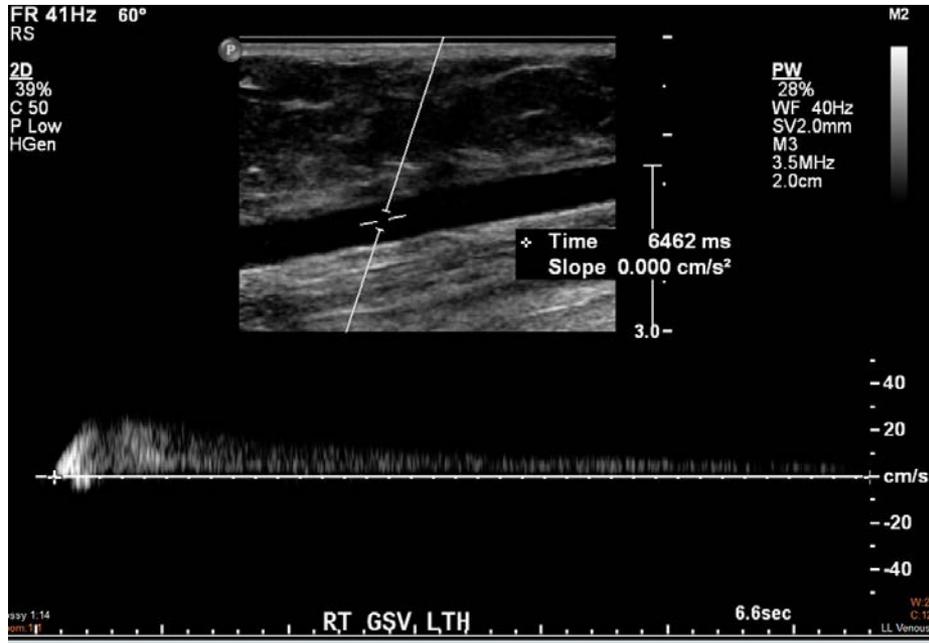
The transition from the normal proximal GSV to the refluxing segment is easily seen during the release of calf compression. There is no back flow in the proximal segment and retrograde flow in the distal one.



The transition from the normal proximal GSV to the refluxing segment is easily seen during the release of calf compression. There is no back flow in the proximal segment and Prolonged retrograde flow in the distal one as seen by the Doppler waveform.

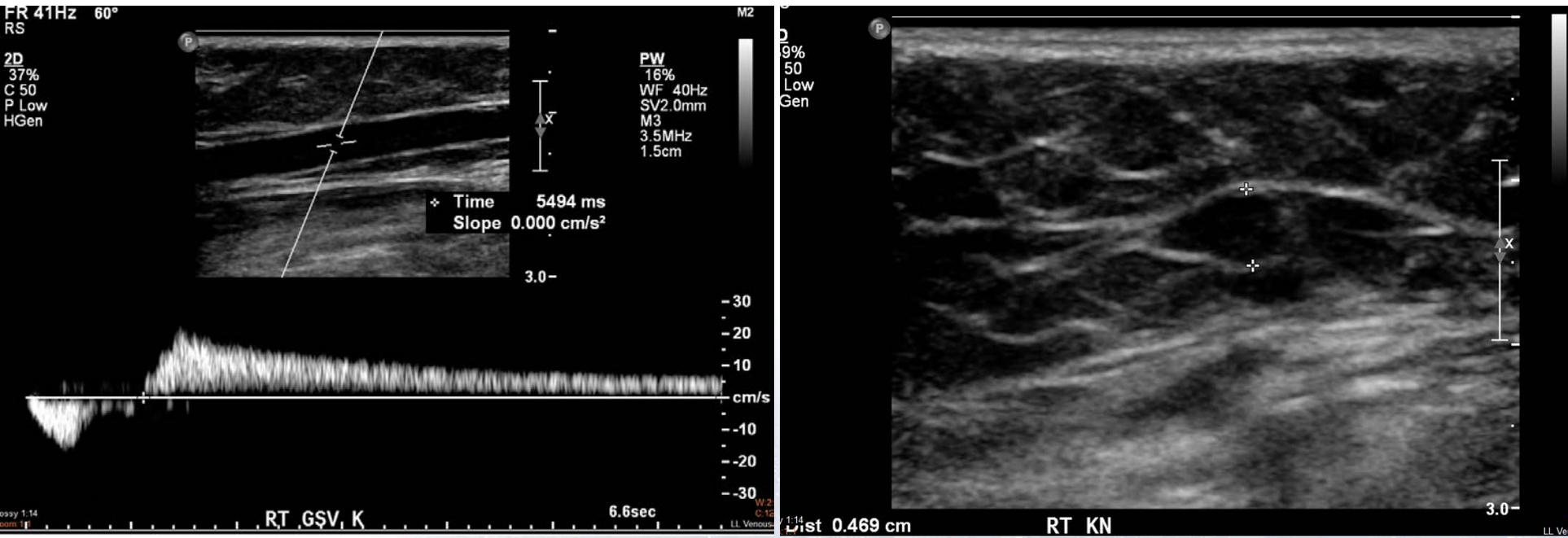


The diameter of the normal proximal GSV is smaller compared to the refluxing segment distally.

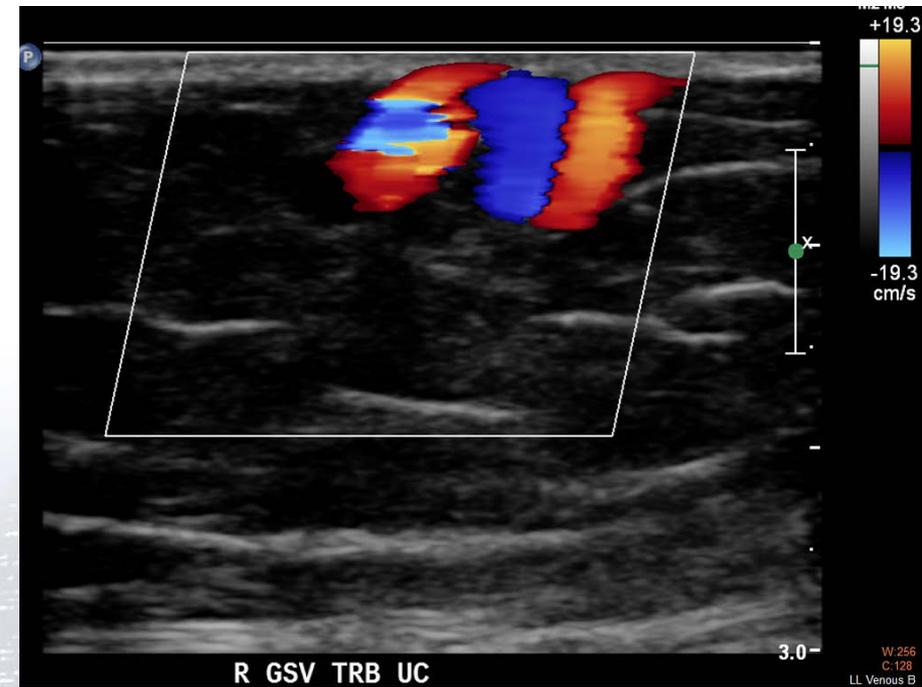
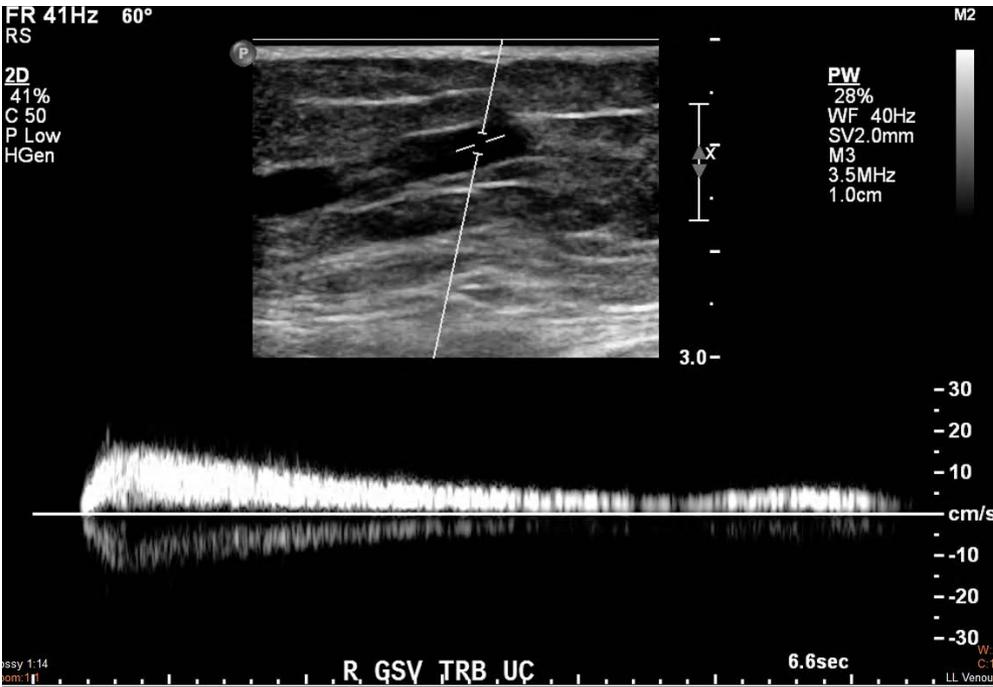


The retrograde flow in the lower thigh GSV lasts over 6.4s. The diameter at this level is 4.9mm. The larger the GSV diameter the higher the chance for detecting reflux. However, many refluxing GSVs have a “normal” diameter. As it is not known what was the diameter prior to reflux development the word “normal” is in question. Clearly, **a small diameter vein can have significant reflux.**

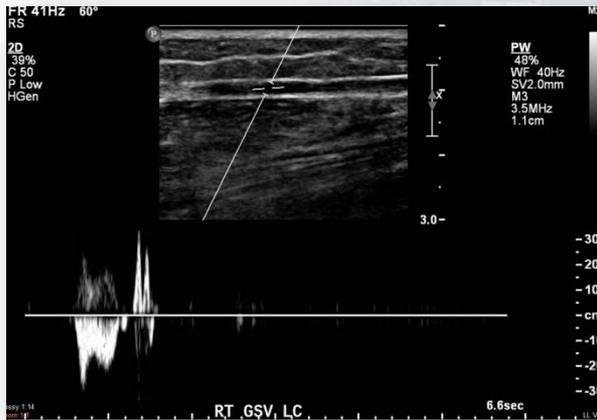
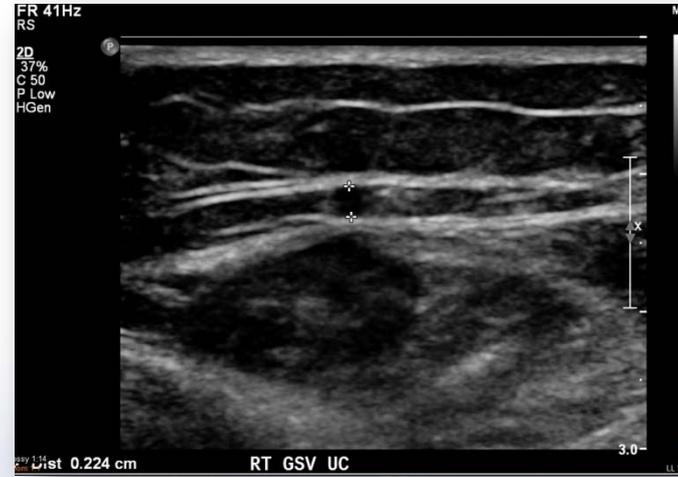
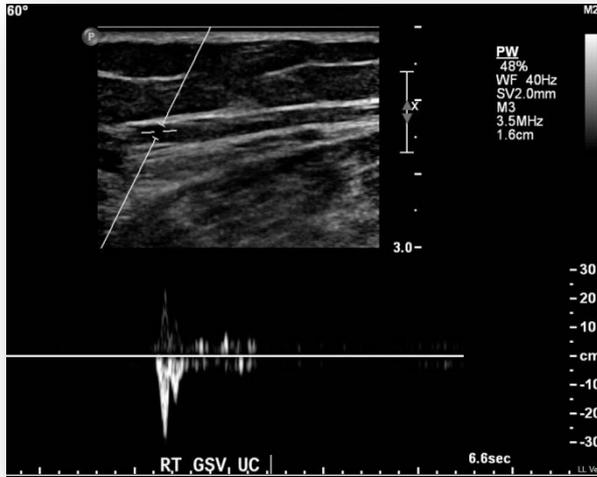
Labropoulos N, Kokkosis AA, Spentzouris G, Gasparis AP, Tassiopoulos AK. The distribution and significance of varicosities in the saphenous trunks. J Vasc Surg 2010;51:96-103.



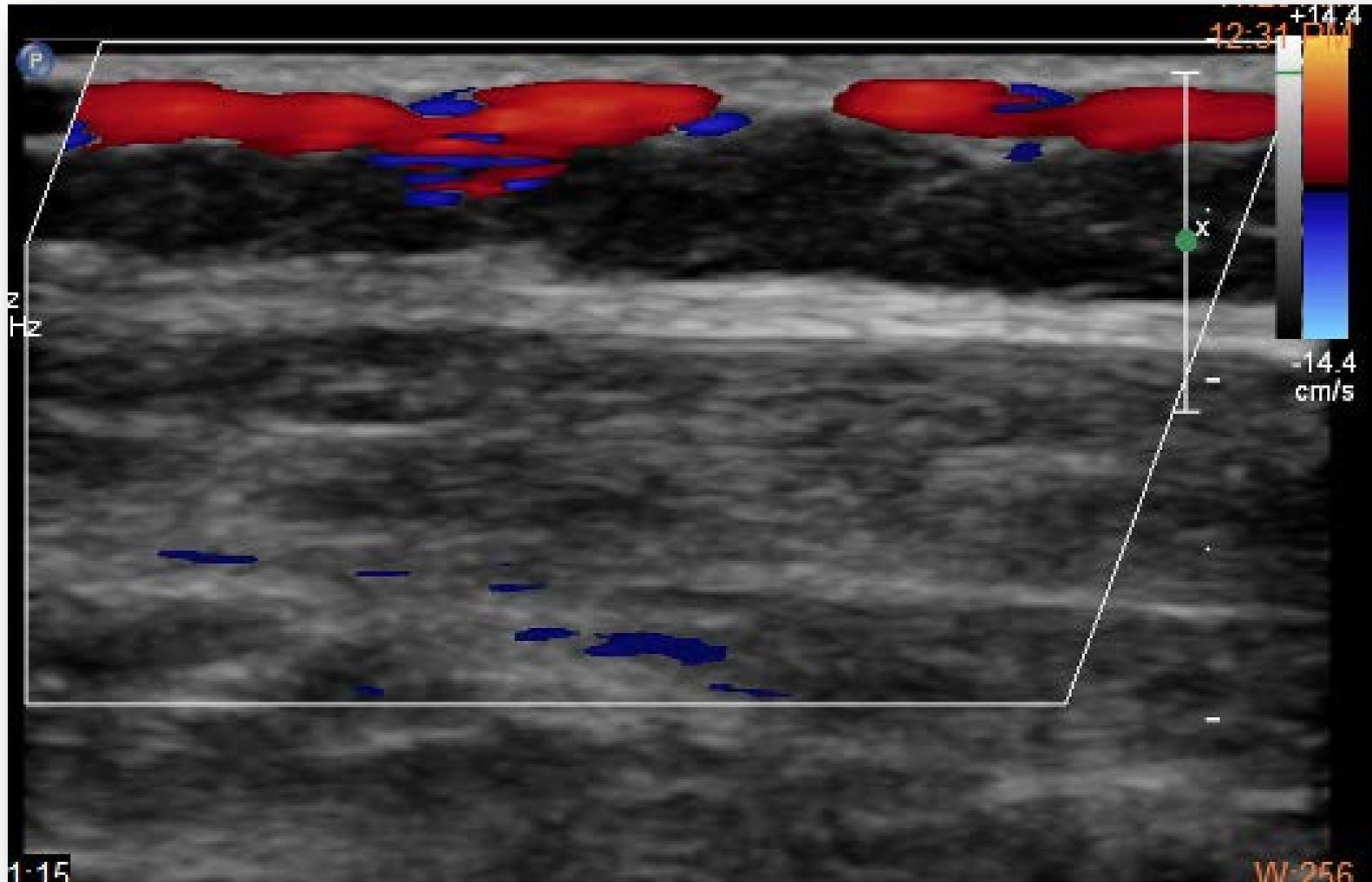
Reflux is seen in continuity with the lower thigh GSV segment at the knee level.



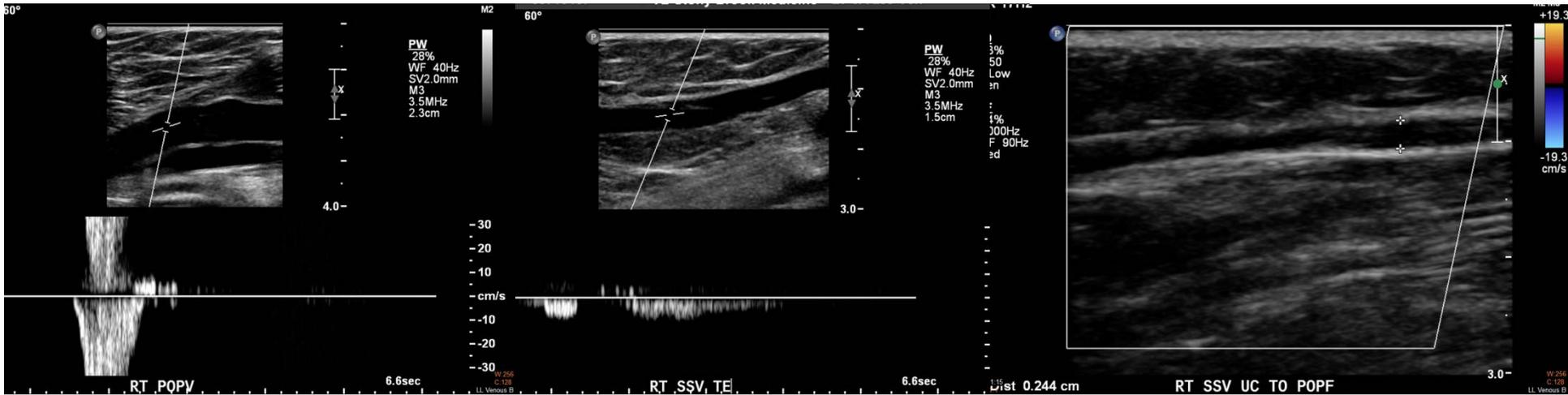
A calf tributary uniting with the reflux GSV in the upper calf had reflux. Varicose veins were connecting with this tributary in the upper medial calf. The varicose veins have a diameter ranging from 3mm to 6.1mm.



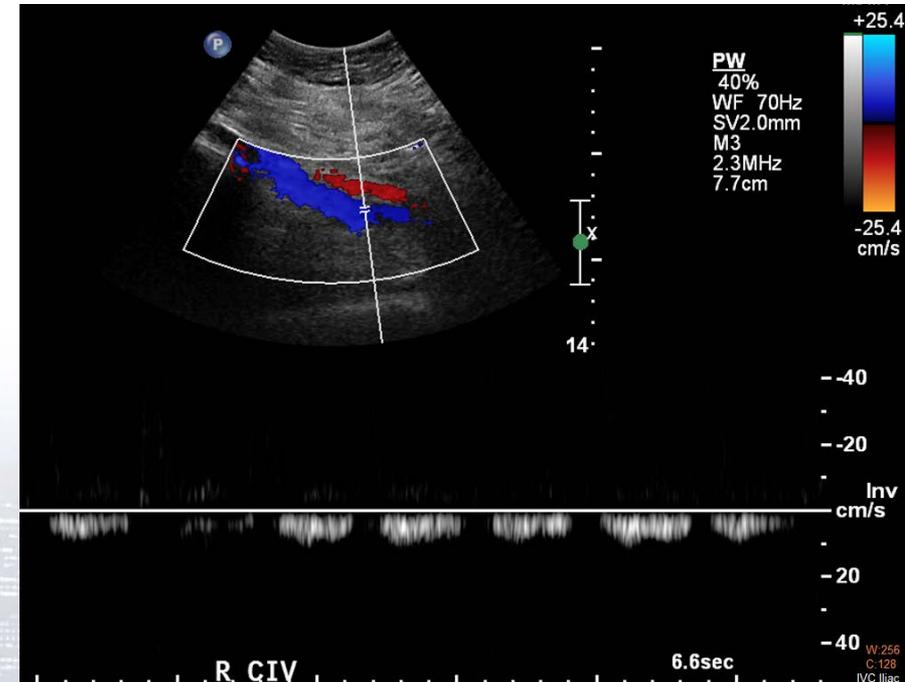
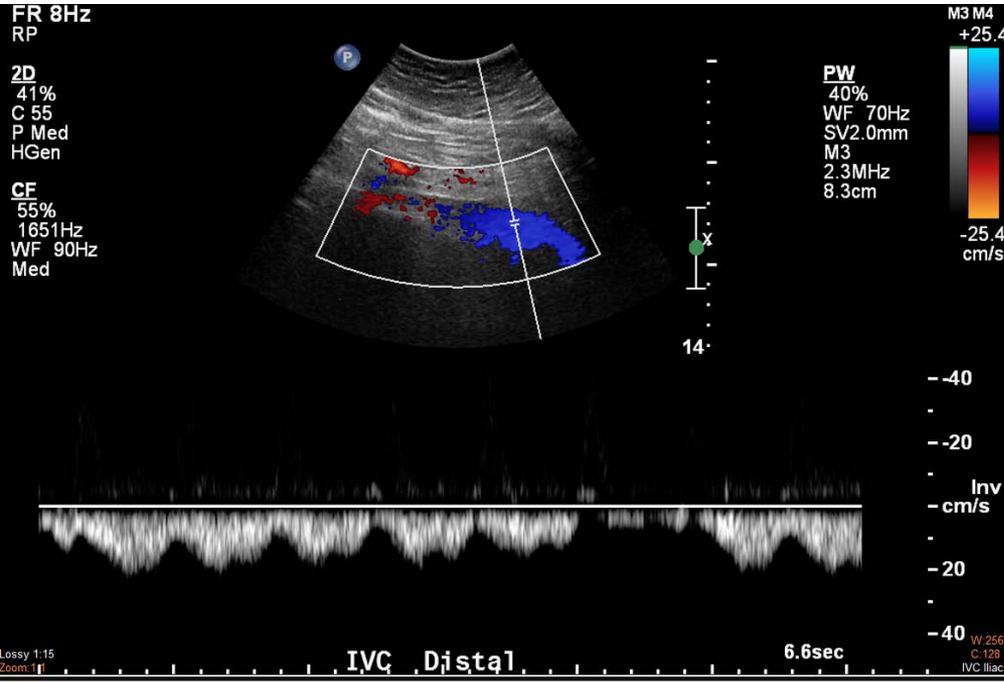
The GSV from the lower third of the upper calf to medial malleolus was normal. Its diameter measured 2.2mm and 2mm respectively.



Reticular veins in the lower medial thigh, knee, posterior-lateral thigh and popliteal fossa had reflux. The diameter of the vein seen above measured 1.5mm.

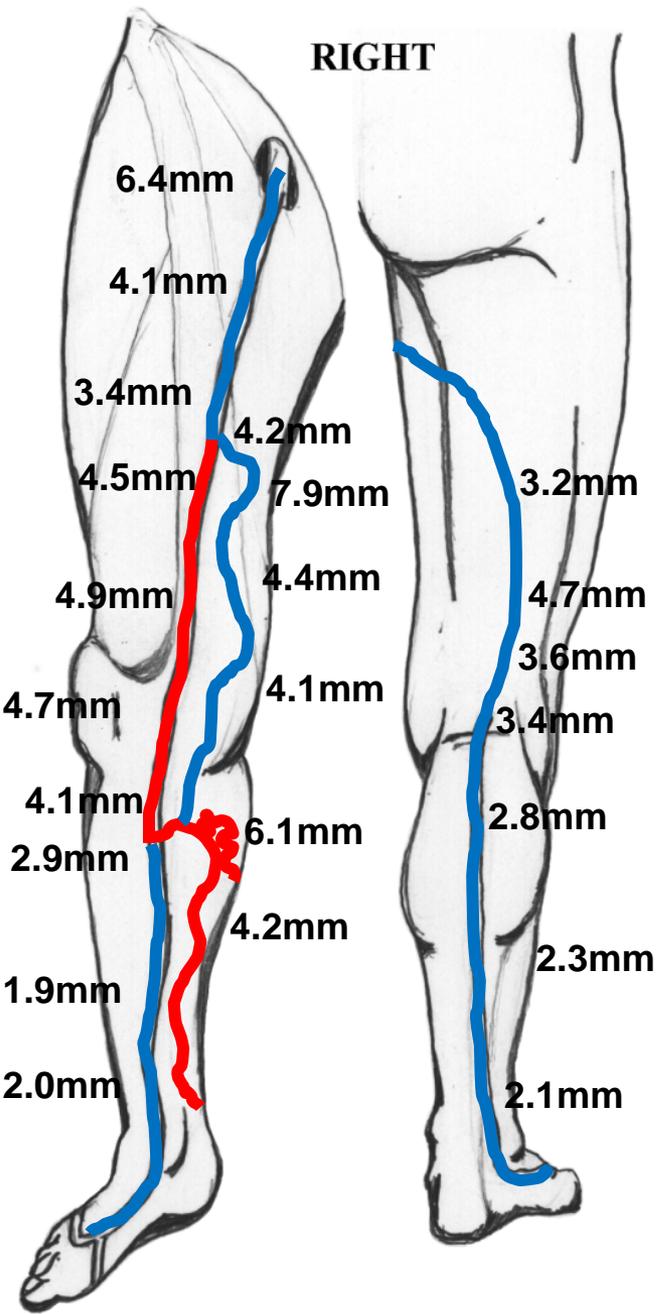


Popliteal vein , SSV and its thigh extension were normal.



The patient presented with swelling and both the iliac veins and IVC were imaged. The IVC and iliac veins were normal.

RIGHT



C1,2,3s EP AS PR

Reflux was found in GSV from mid-thigh to upper calf and in medial calf tributary.

Reticular veins in the lower medial thigh, knee, posterior-lateral thigh and popliteal fossa had reflux. SSV and deep veins were normal.

The diameter of normal GSV is smaller on both the proximal and distal end of the refluxing GSV segment. SSV and its thigh extension are not connected with the refluxing area.



The patient has segmental reflux of the GSV and reflux in calf tributaries and reticular veins. The diameter of the GSV was not very dilated.

Treatment of the refluxing calf tributary with phlebectomies and sclerotherapy of the reticular veins will be the first step. Evaluation of the patient's symptoms and a repeat ultrasound 1 month after the treatment will determine further interventions.

Treatment of the GSV tributaries alone has shown to reduce the GSV diameter and Reflux duration.

Chastanet S, Pittaluga P. Influence of the competence of the sapheno-femoral junction on the mode of treatment of varicose veins by surgery. *Phlebology*. 2014;19:29(1 suppl):61-65.

Pittaluga P, Chastanet S, Locret T, Barbe R. The effect of isolated phlebectomy on reflux and diameter of the great saphenous vein: a prospective study. *Eur J Vasc Endovasc Surg*. 2010;40:122-8.

Pittaluga P, Chastanet S, Rea B, Barbe R. Midterm results of the surgical treatment of varices by phlebectomy with conservation of a refluxing saphenous vein. *J Vasc Surg*. 2009;50:107-18.