CONTROVERSES ET ACTUALITÉS EN CHIRURGIE VASCULAIRE
CONTROVERSIES & UPDATES IN VASCULAR SURGERY
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Deep venous reconstructive surgery for C.V.I. New procedures and tricks.

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Disclosure

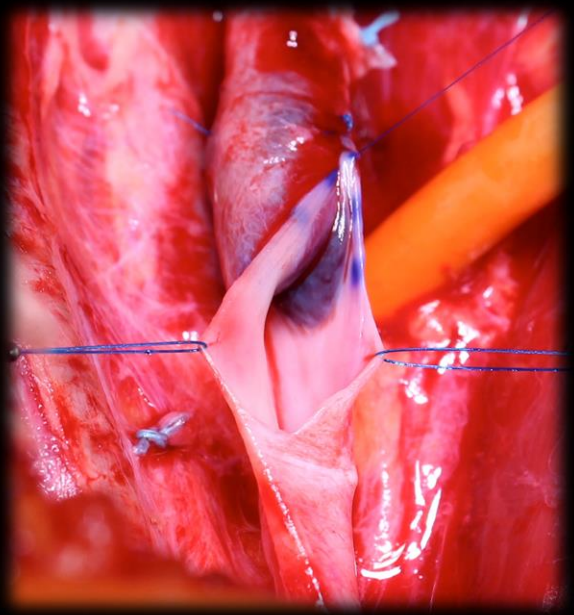
OSCAR MALETI

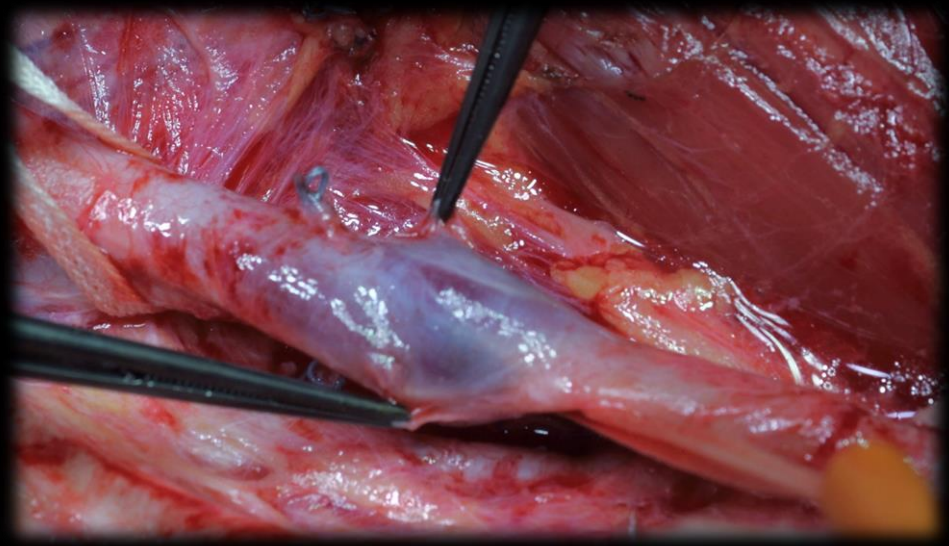
- ☐ I have the following potential conflicts of interest to report:
- ☐ Consulting
- ☐ Employment in industry
- ☐ Shareholder in a healthcare company
- ☐ Owner of a healthcare company
- ☐ Other(s)
- ☒ **I do not have any potential conflict of interest**

What do we mean by

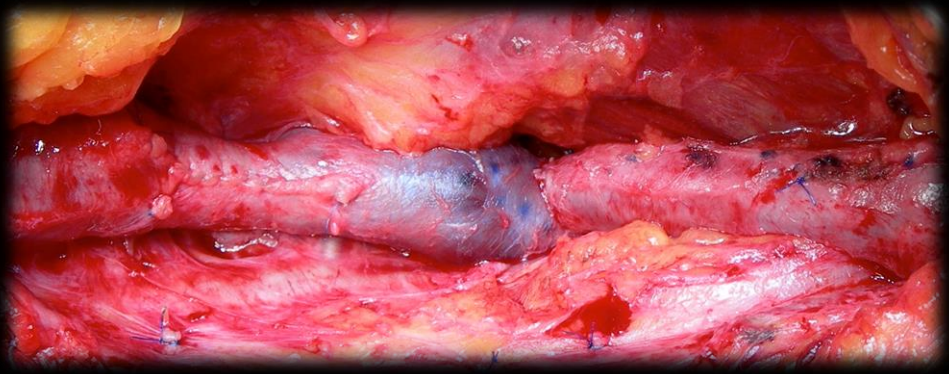
Deep venous reconstructive surgery for chronic venous insufficiency?

Surgery aimed at repairing one or more venous valves,





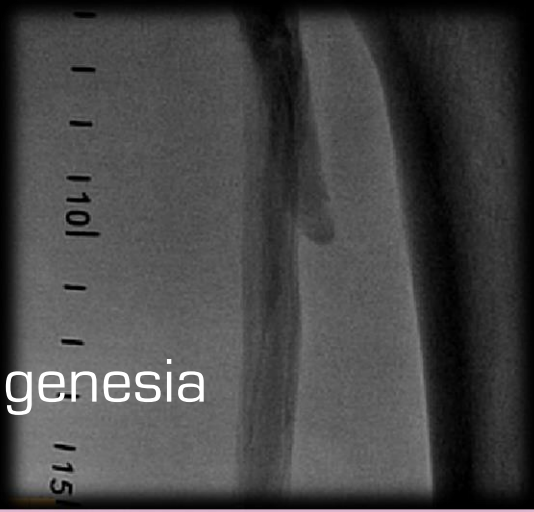
or aimed at reconstructing a non-refluxing segment



The repair is possible:

- Frequently in C.V.I. due to primary reflux

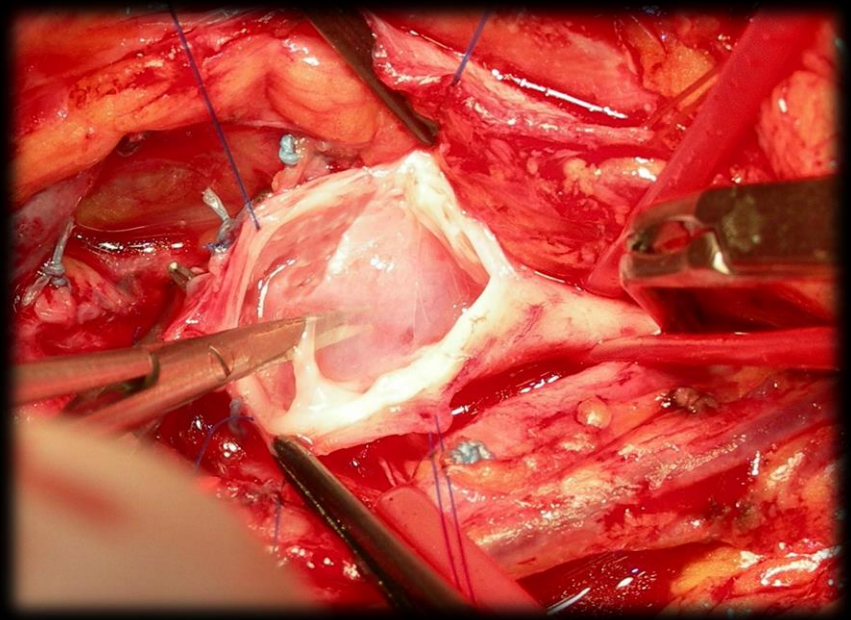
- Rarely in secondary reflux

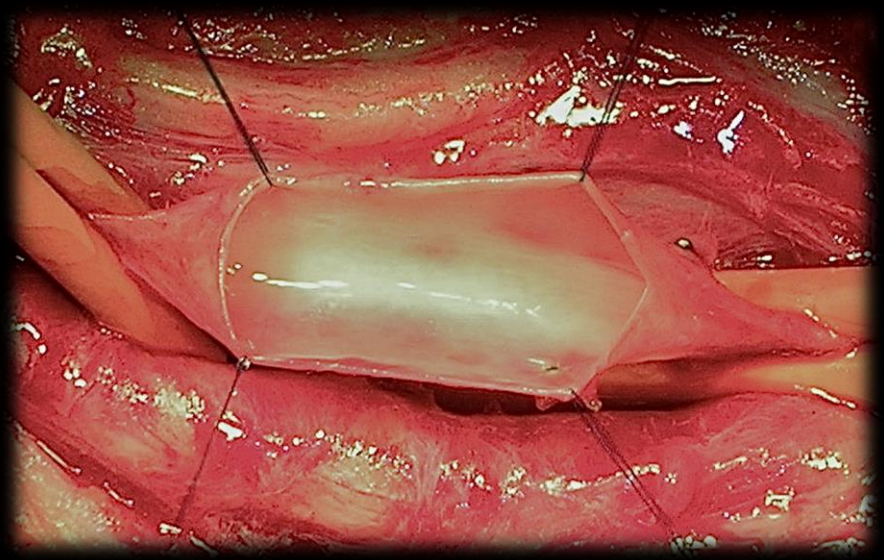


- Never in valve agenesia

Reconstruction is possible in

- Secondary reflux

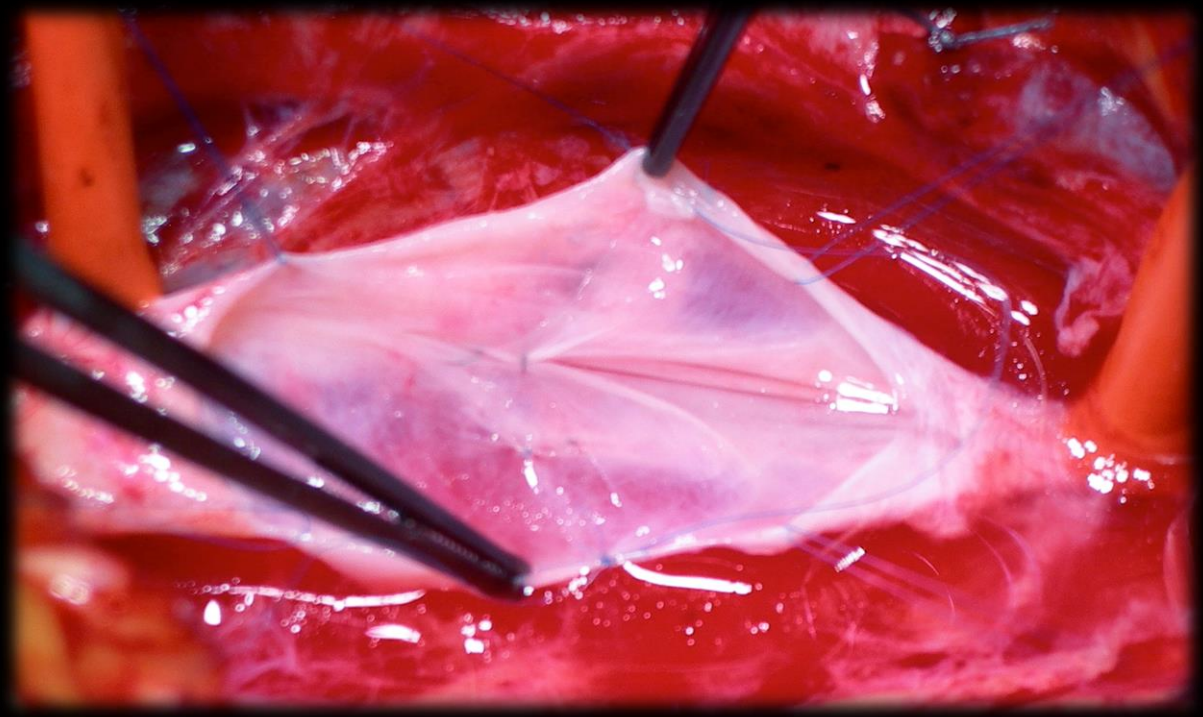




- Valve agenesia

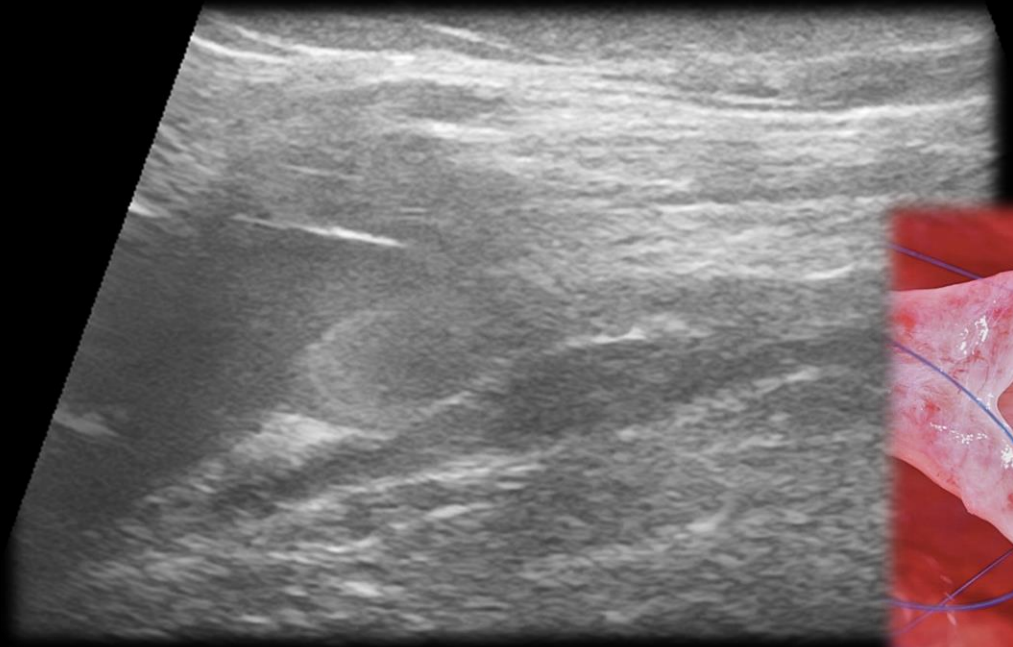
The repair

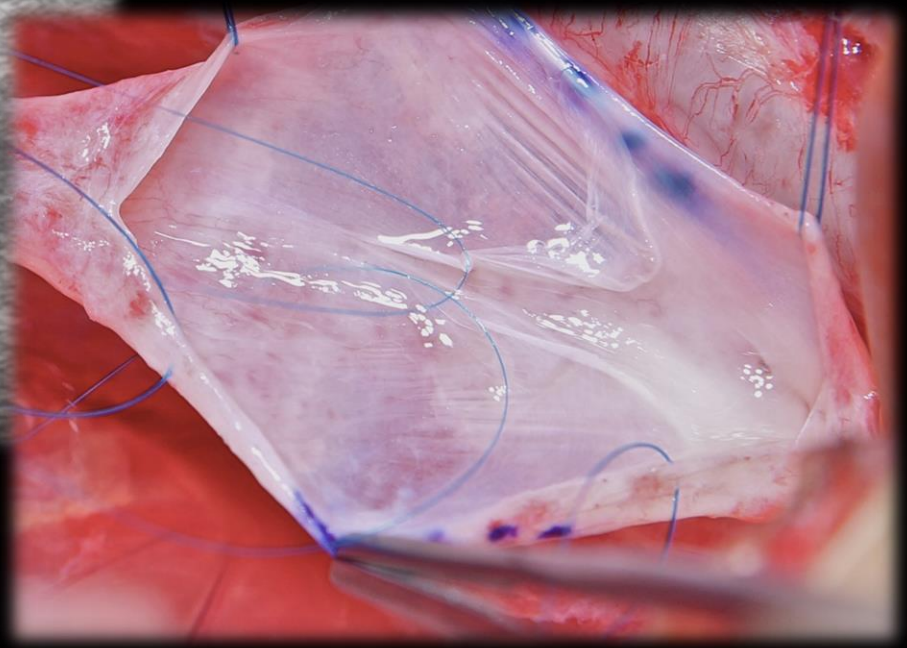
Main technique is valvuloplasty
and it consists in shortening the free edge of the cusps



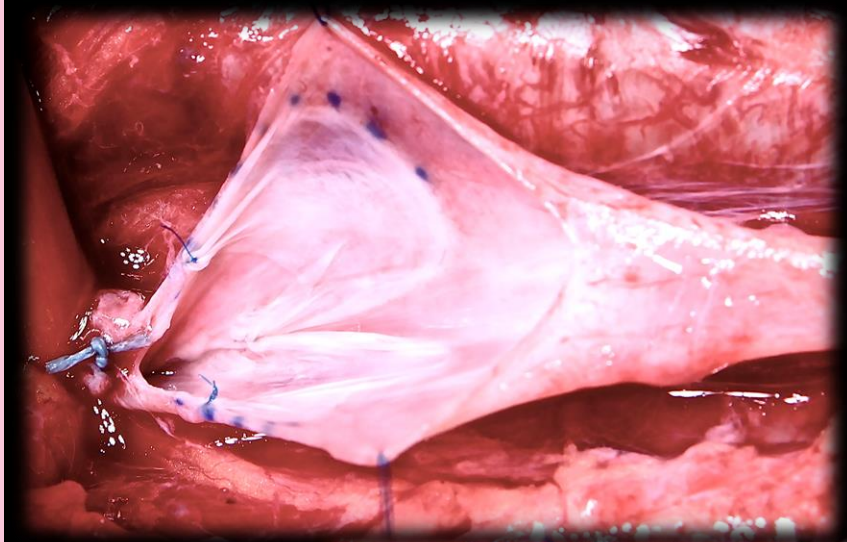
Modified technique:

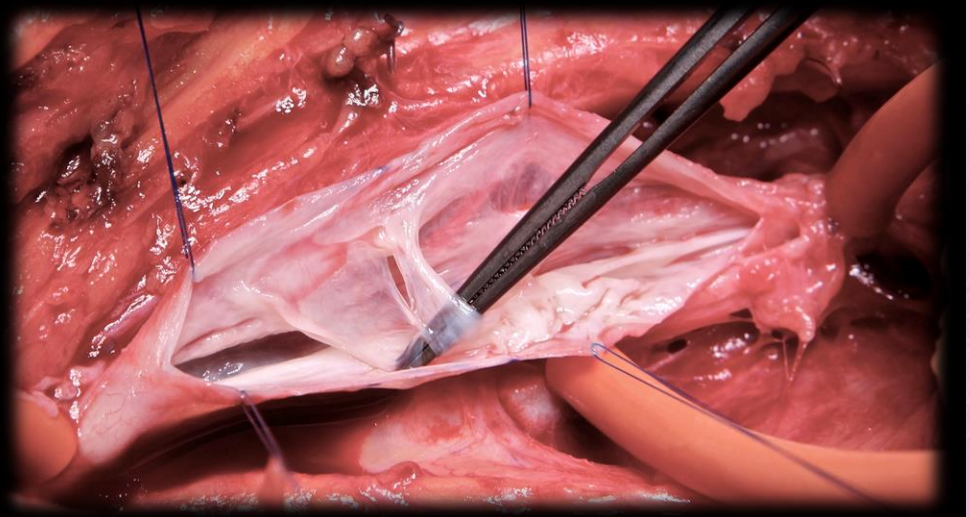
Lifting the free edge of the cusps

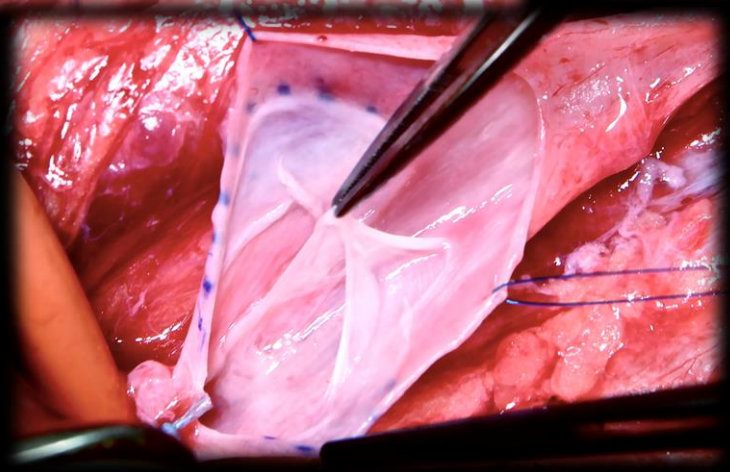




In secondary reflux (PTS) valvuloplasty is rarely feasible





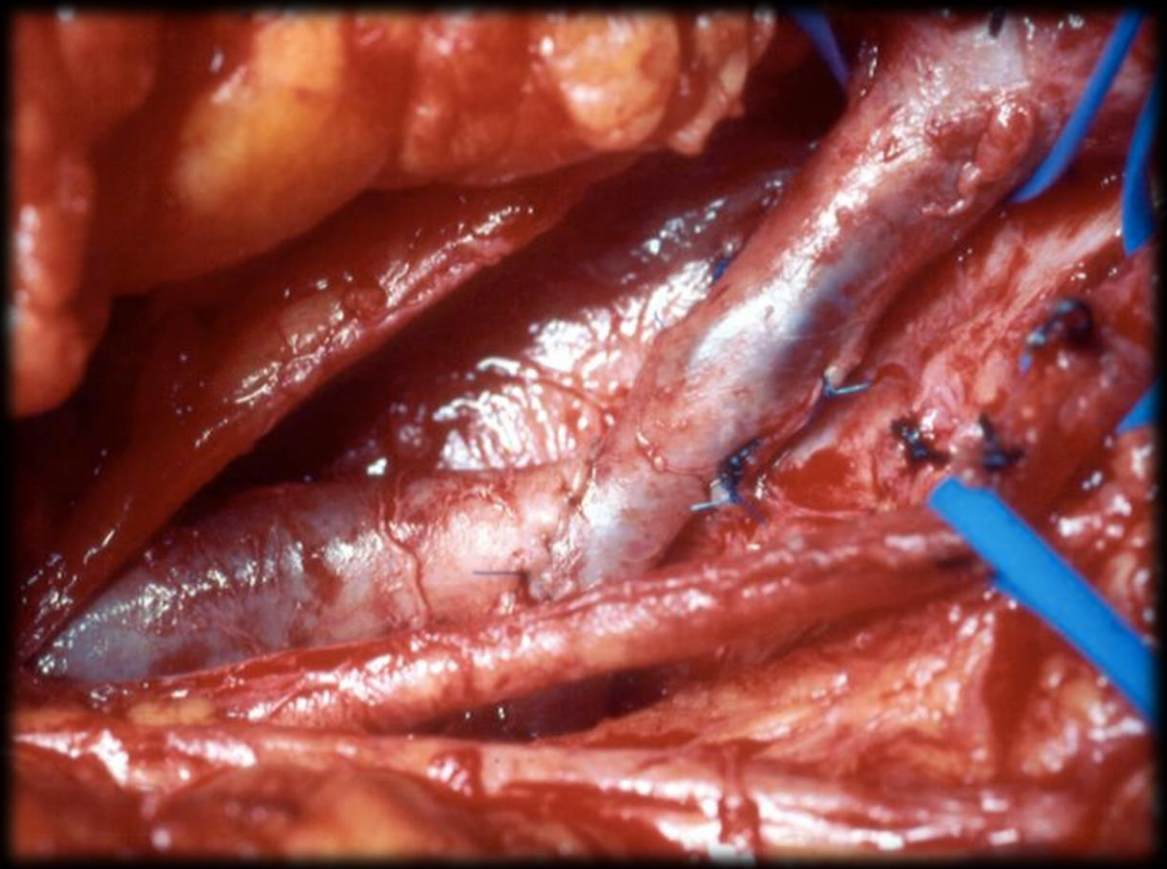


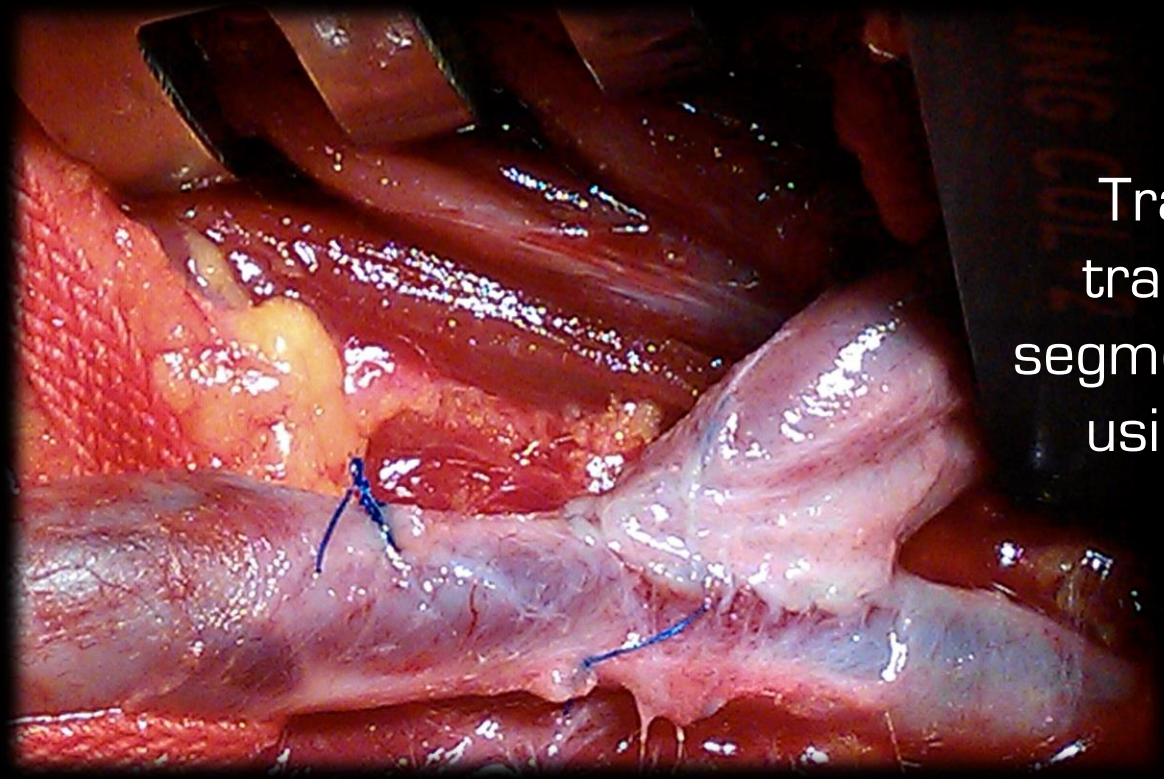
The cusps are thickened and the sinus is modified

In such cases the creation of a new non-refluxing segment is preferable

We have several options

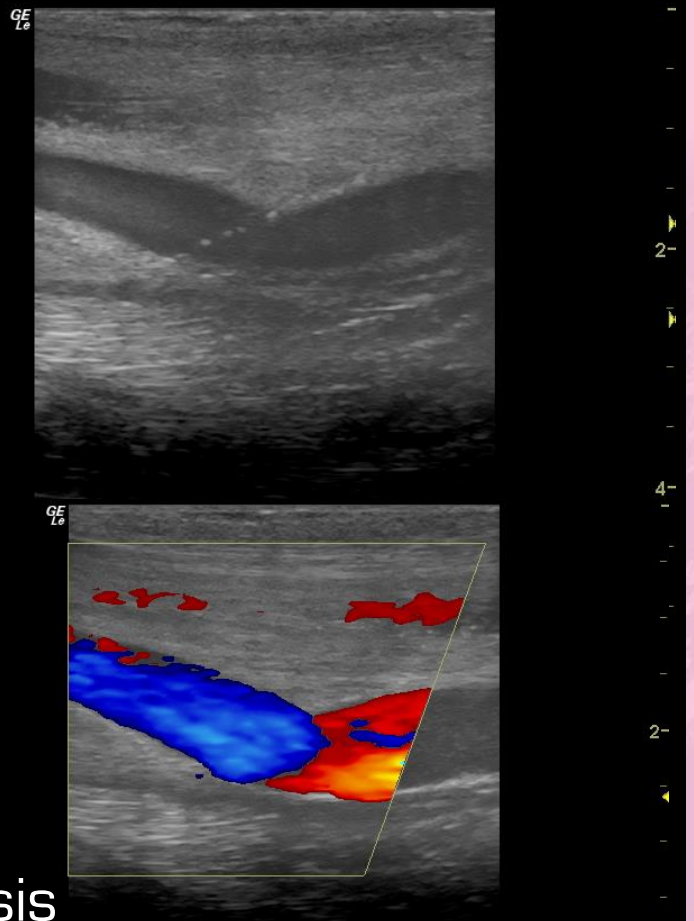
The first option is transposition





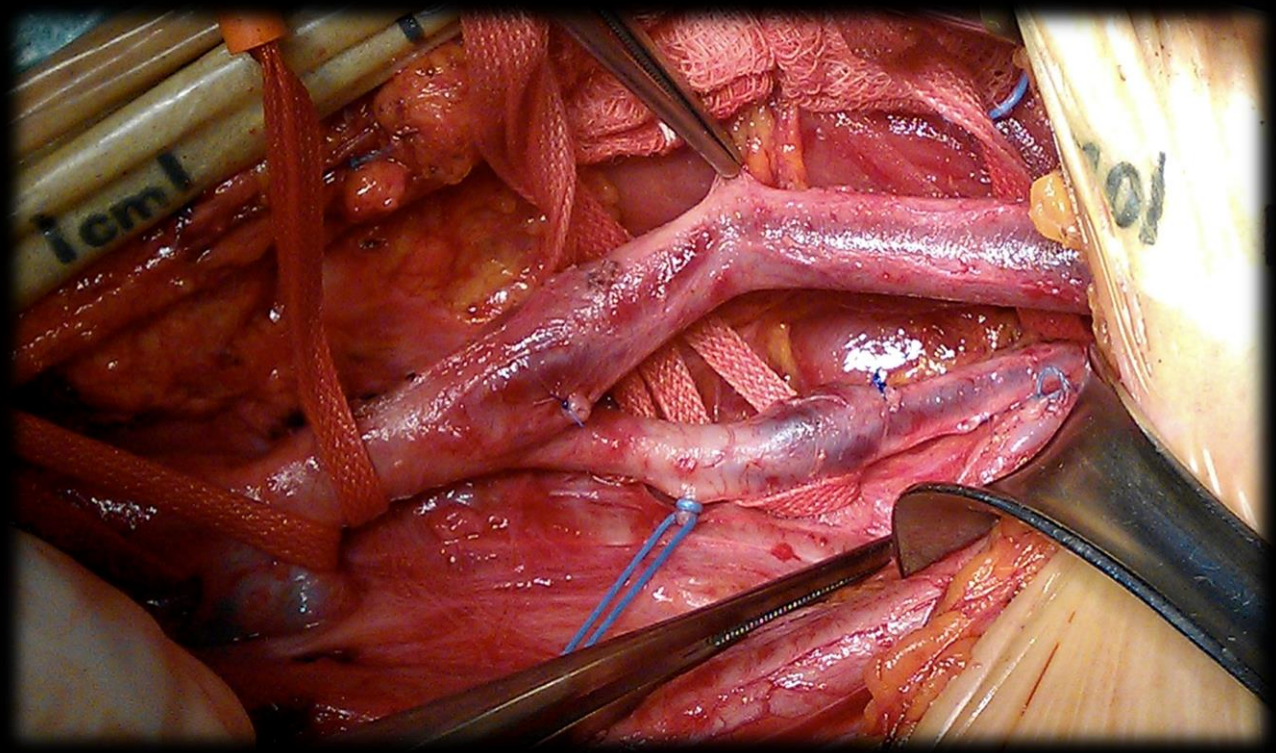
Transposition means to transpose a devalvulated segment into a valvulated one, using various techniques

Transposition on profunda vein

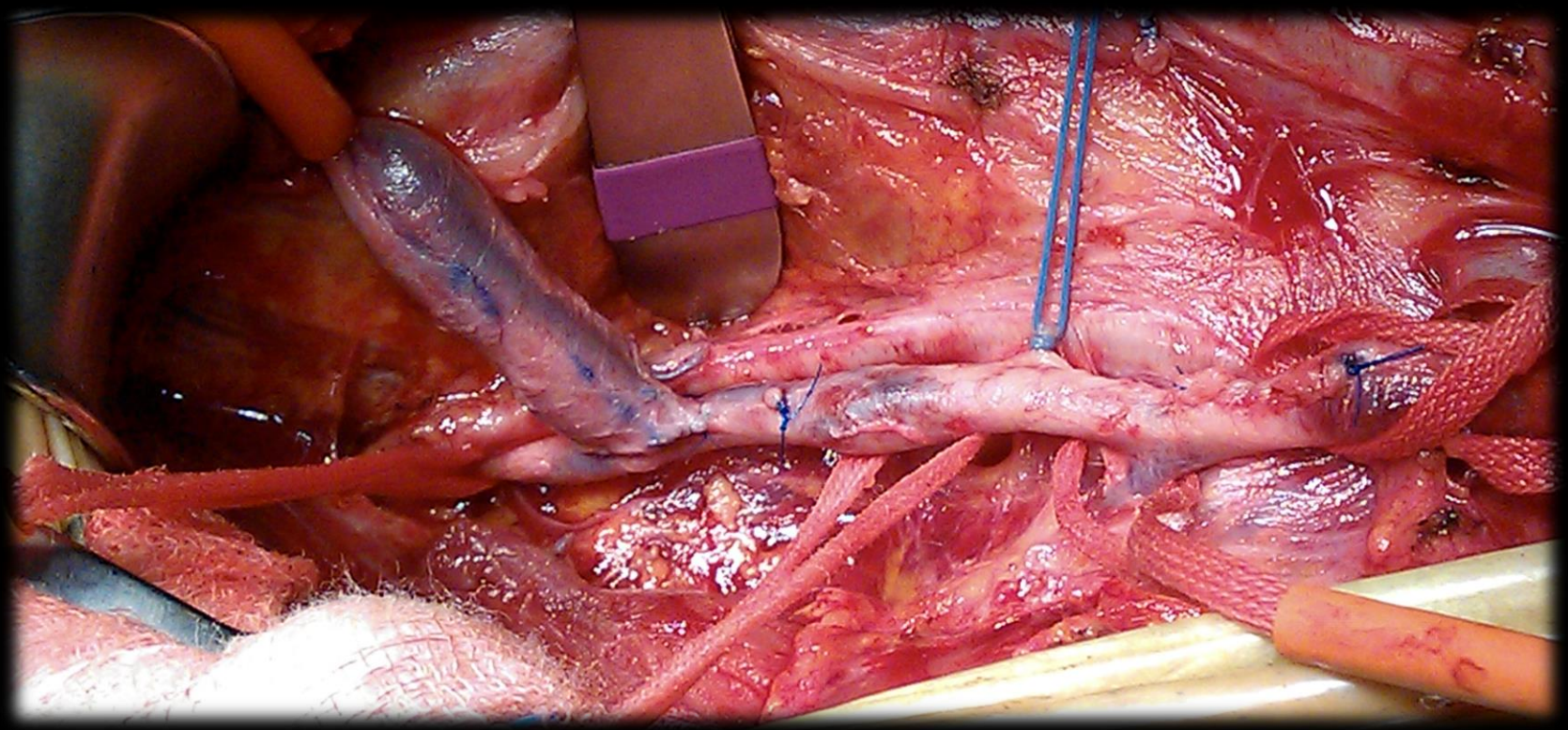


Employing a termino-lateral anastomosis not always hemodinamically efficient

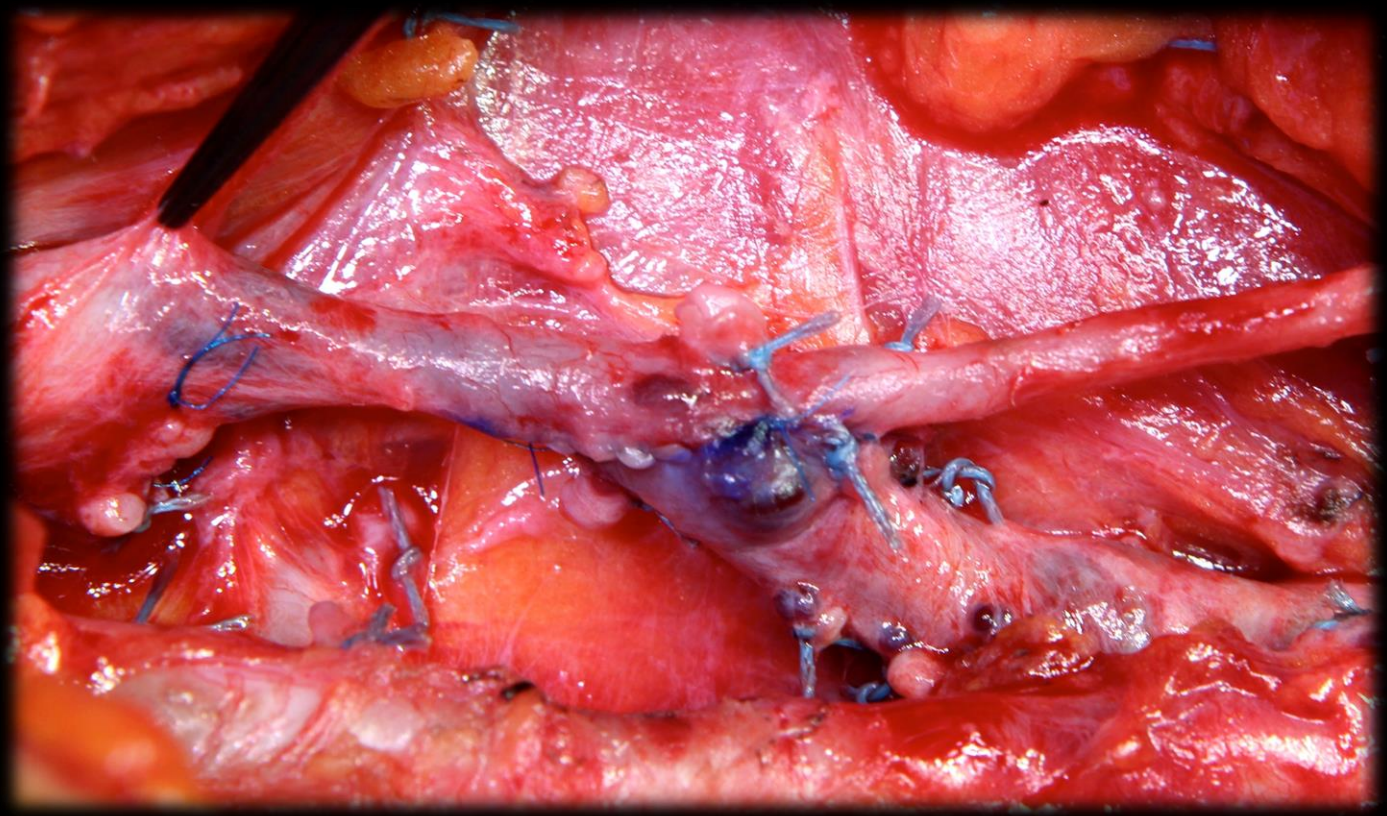
Due to the variable anatomy of the profunda vein



Transposition on saphenous vein

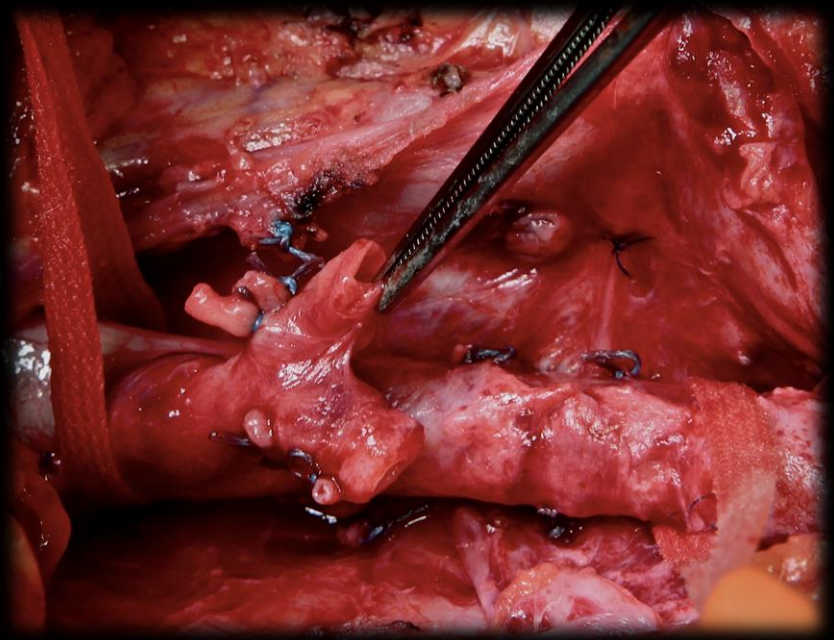


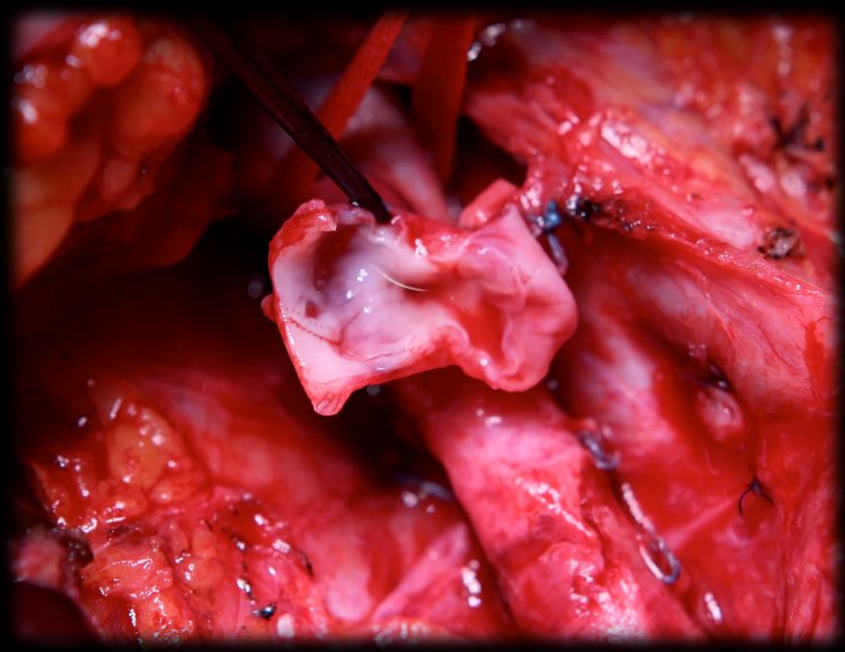
The main limit of transposition on the saphenous vein is the superficial position of the new axis



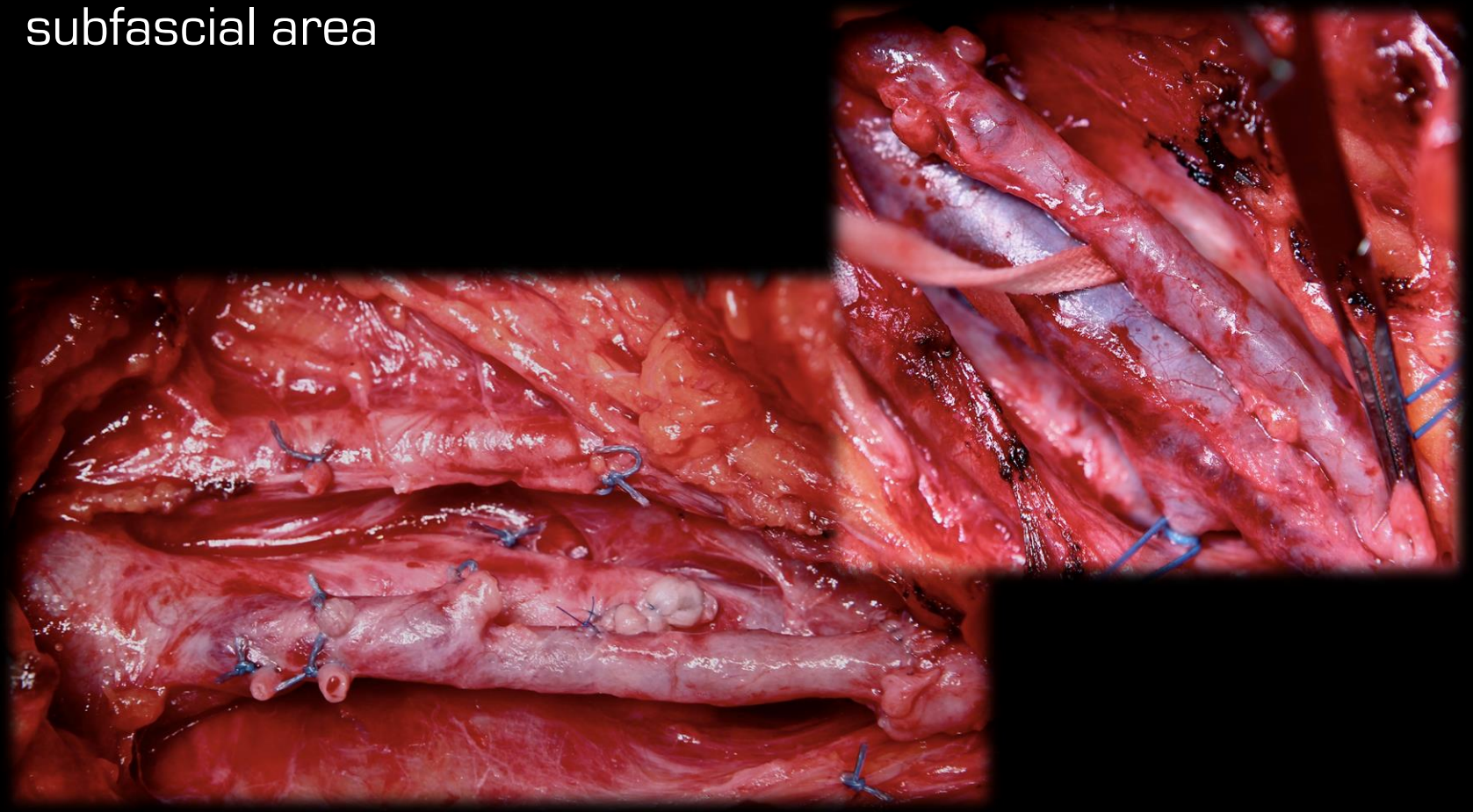
For these reasons we have employed other solutions:

1- To create a new axiality through a femoro-profunda (termino-terminal) anastomosis





2- To translate the first portion of the saphenous vein in subfascial area

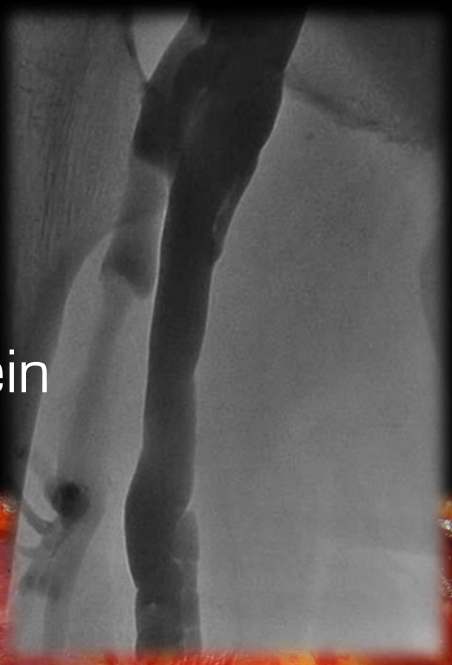


3- To perform a distal femoro-profunda transposition

The choice among these options depends on:

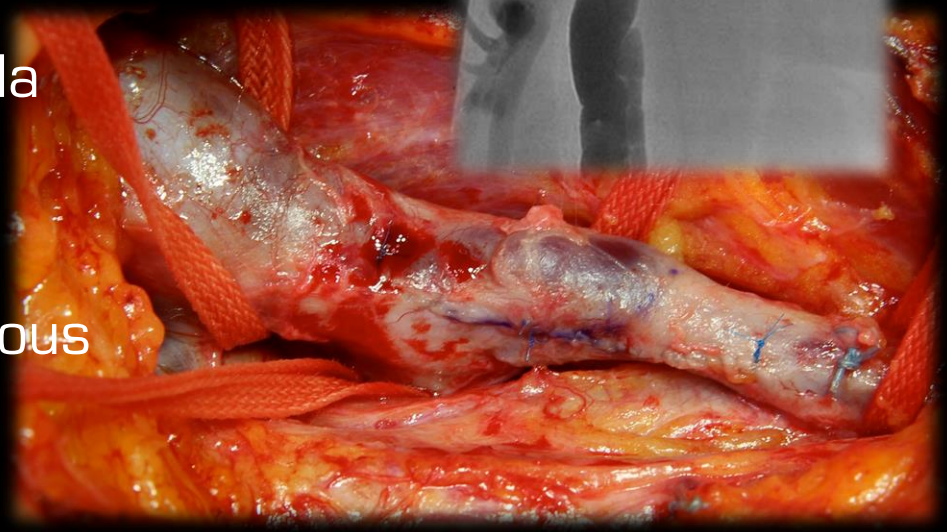
- Competence and caliber of the saphenous vein

- Competence and anatomy of the profunda vein

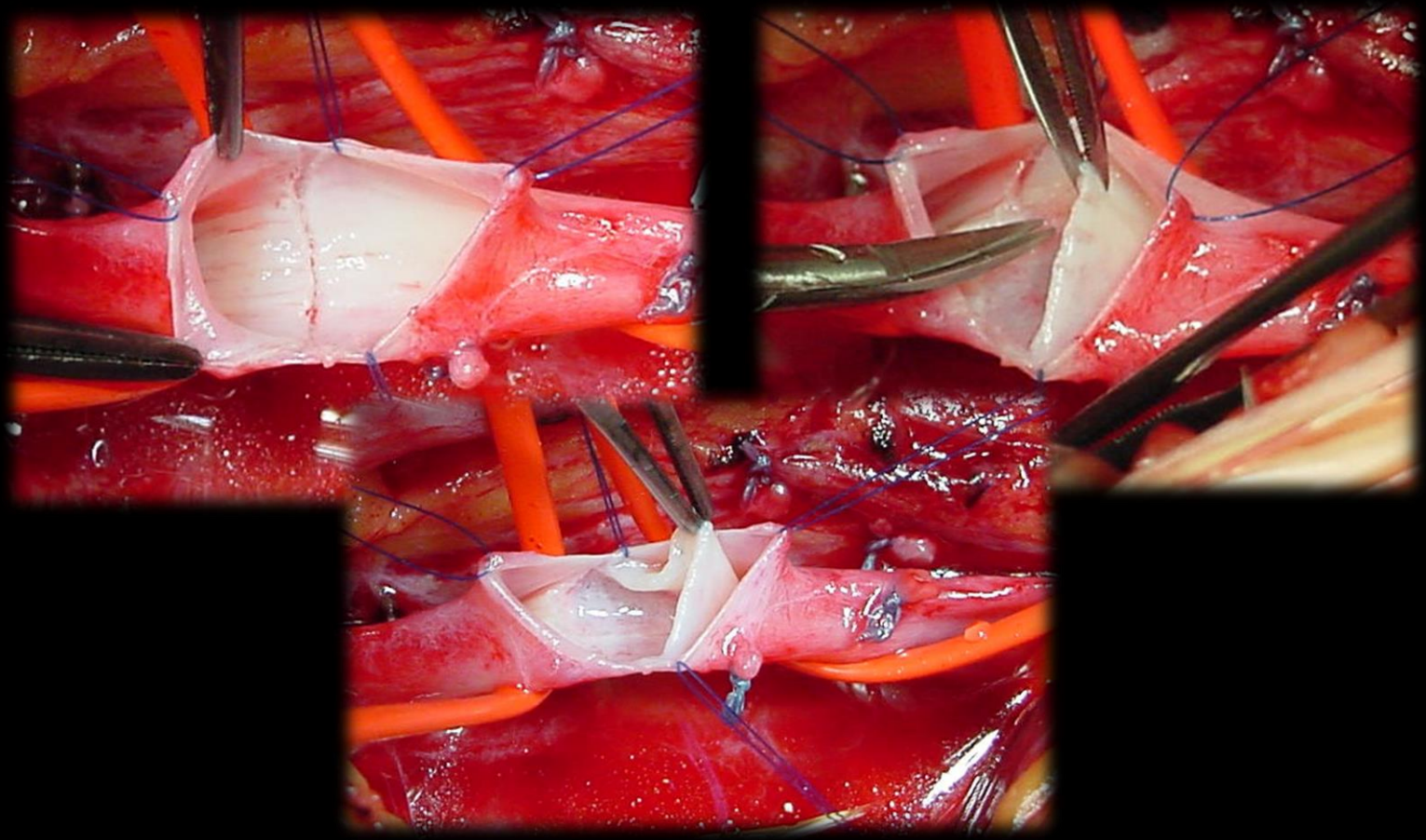


- Incompetence of the profunda vein but with reparable valve

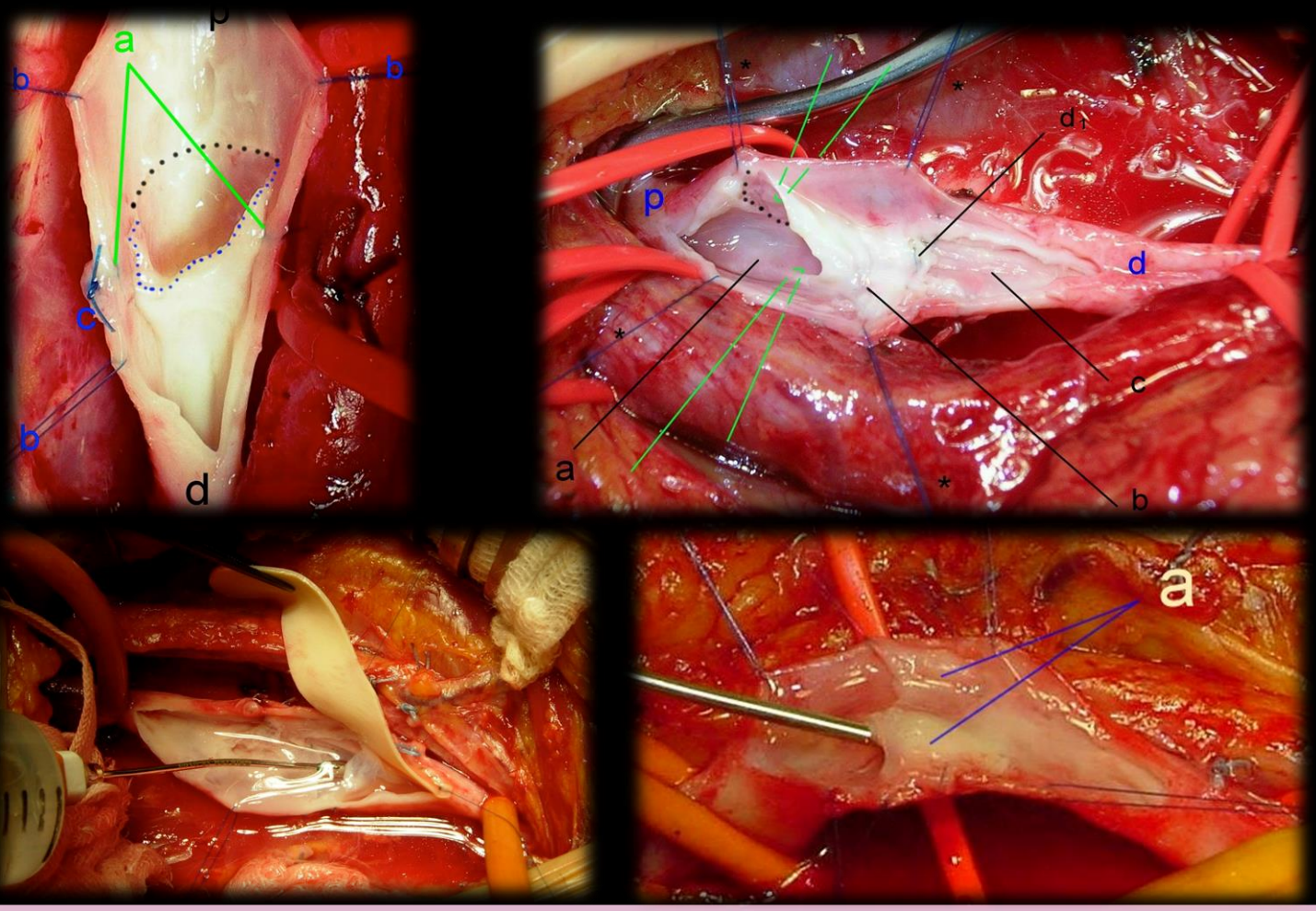
- Incompetence of the saphenous vein but with reparable valve



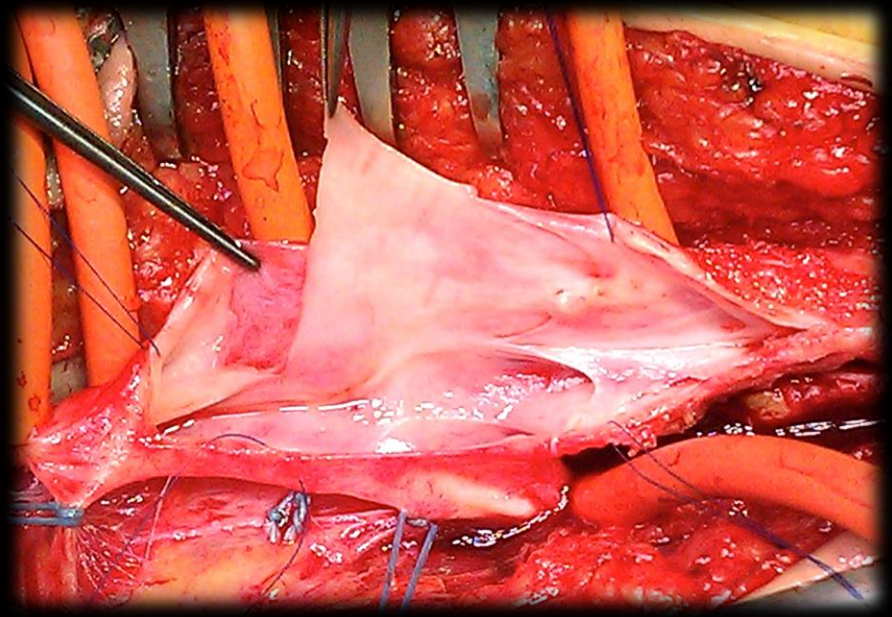
The neovalve is the second preferable option



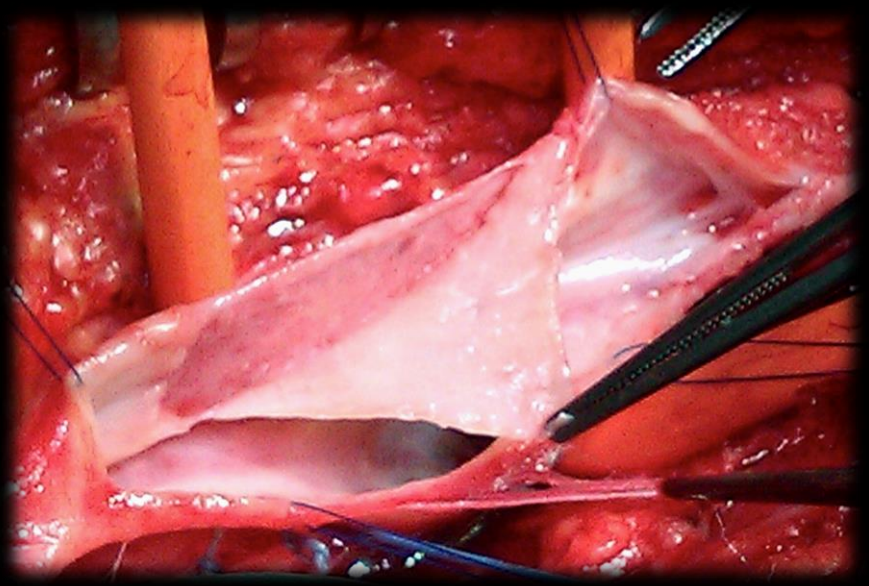
This technique has been submitted to improvement



Neovalve creating a competing flow



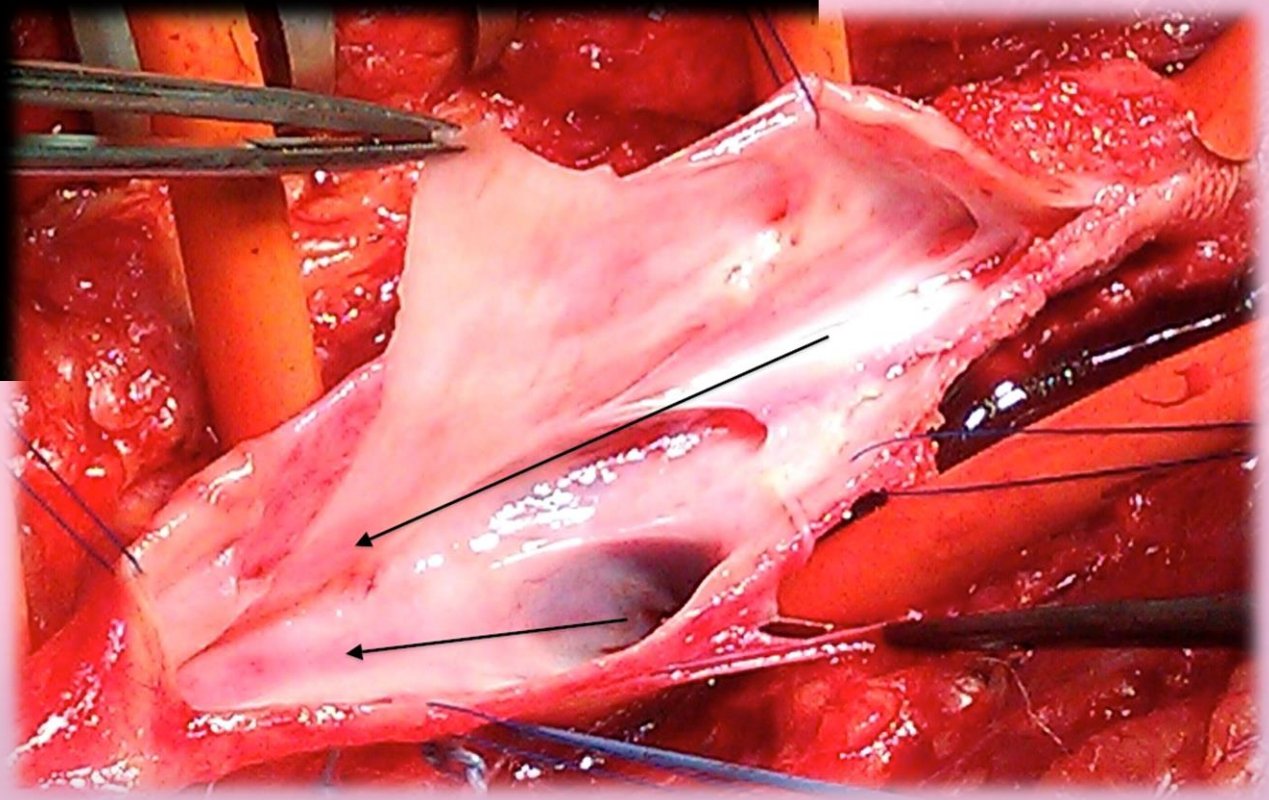
The technique is the same but the sinus of the valve is created in front of a venous branch



Advantages:

- To create a wash action into the pocket

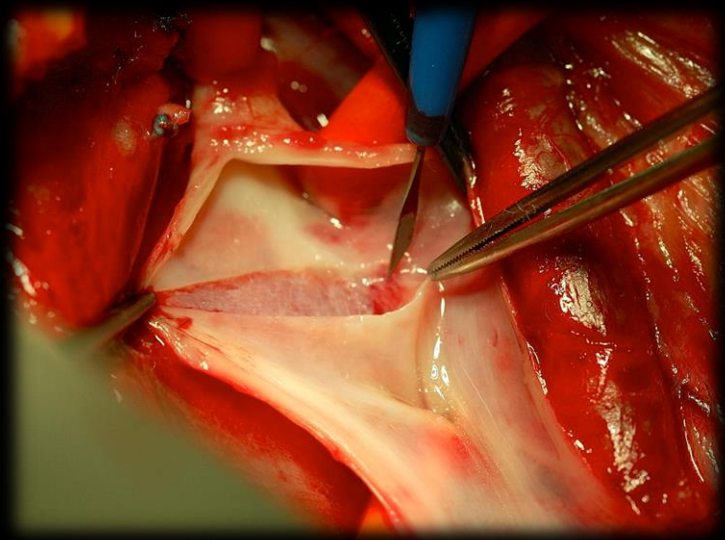
- To create a mobile flap



Reconstruction in valve agenesia

The absence of the valves affects the femoral and the profunda district

- Neovalve



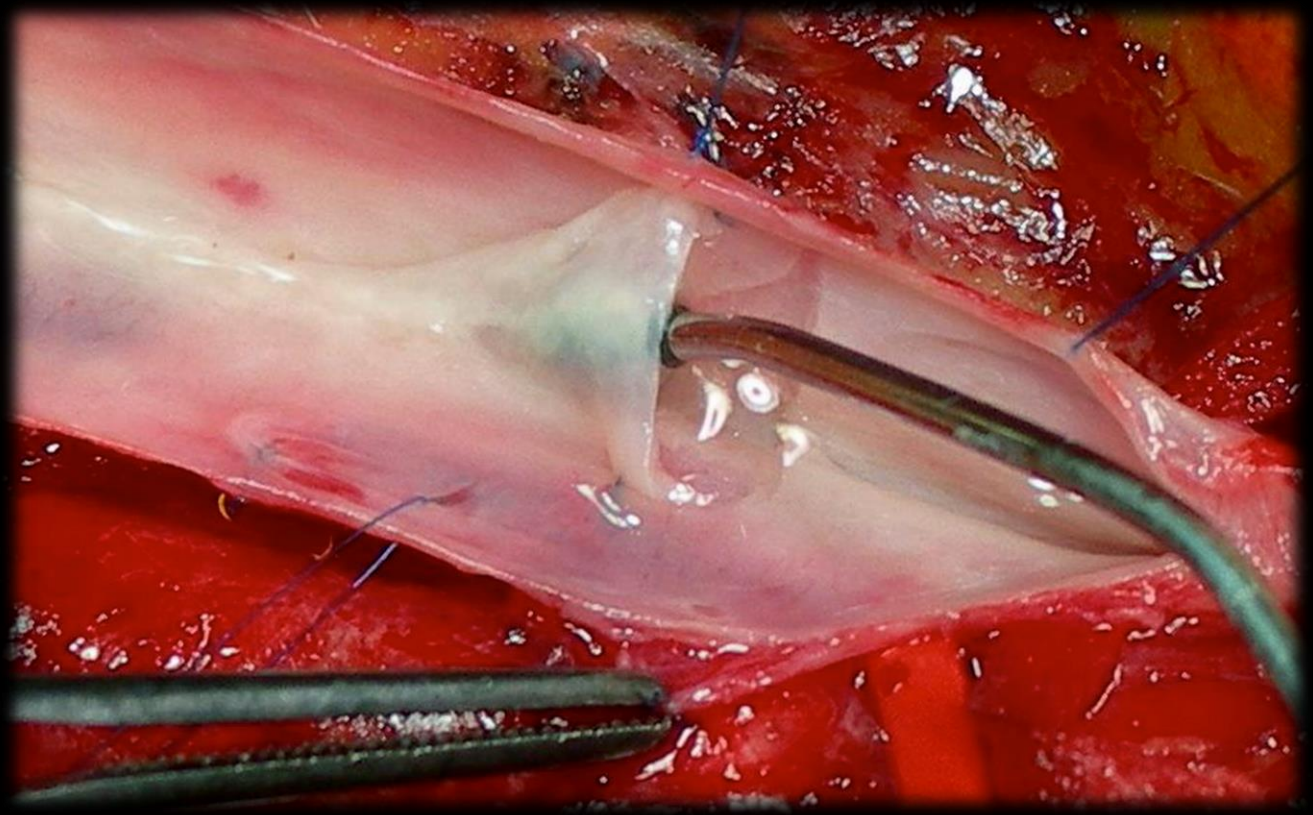
- Valve transplant

Associated with

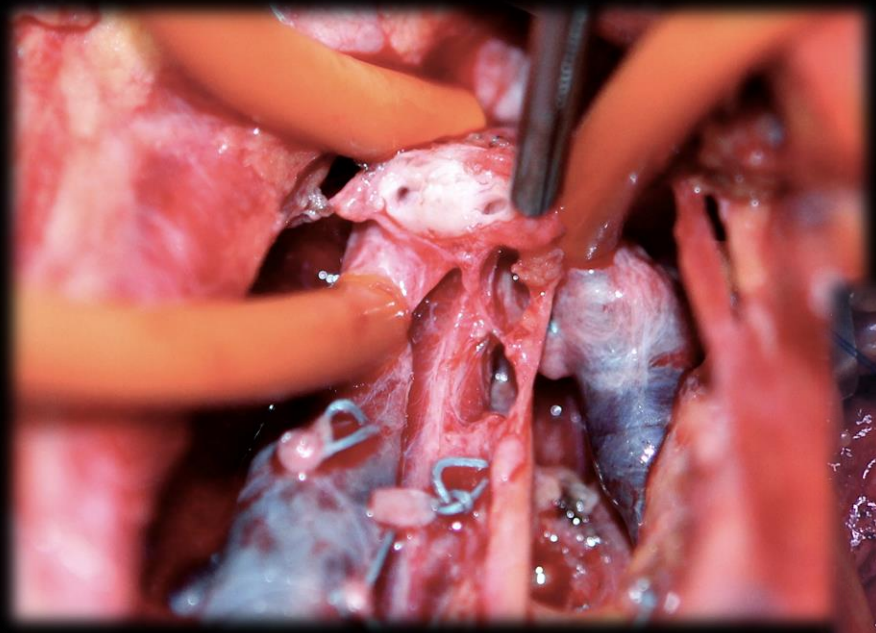
- Embolization of complex parallel refluxes

Valve agenesia

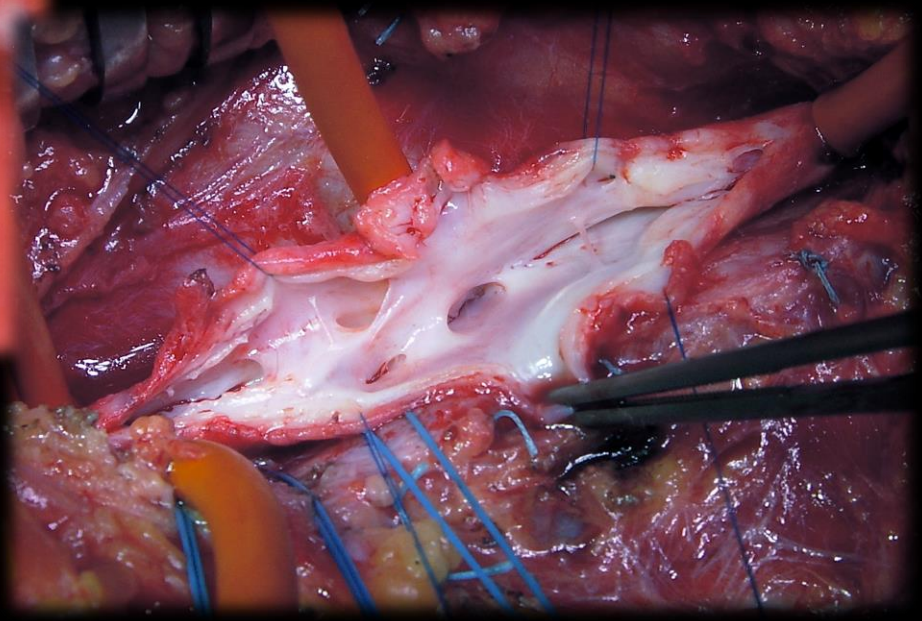
The pathology is still a challange



These techniques address most frequently the post thrombotic syndrome

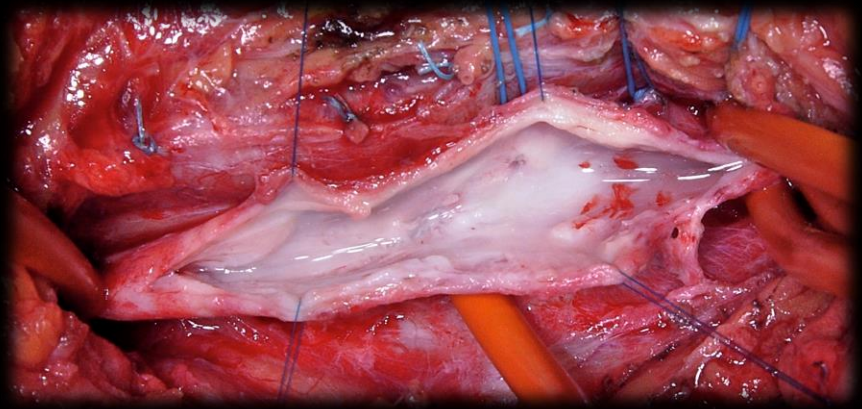


and an additional action is frequently opportune:
endophlebectomy



Endophlebectomy consists in removing the fibrosis which determines an obstruction.

- The original technique



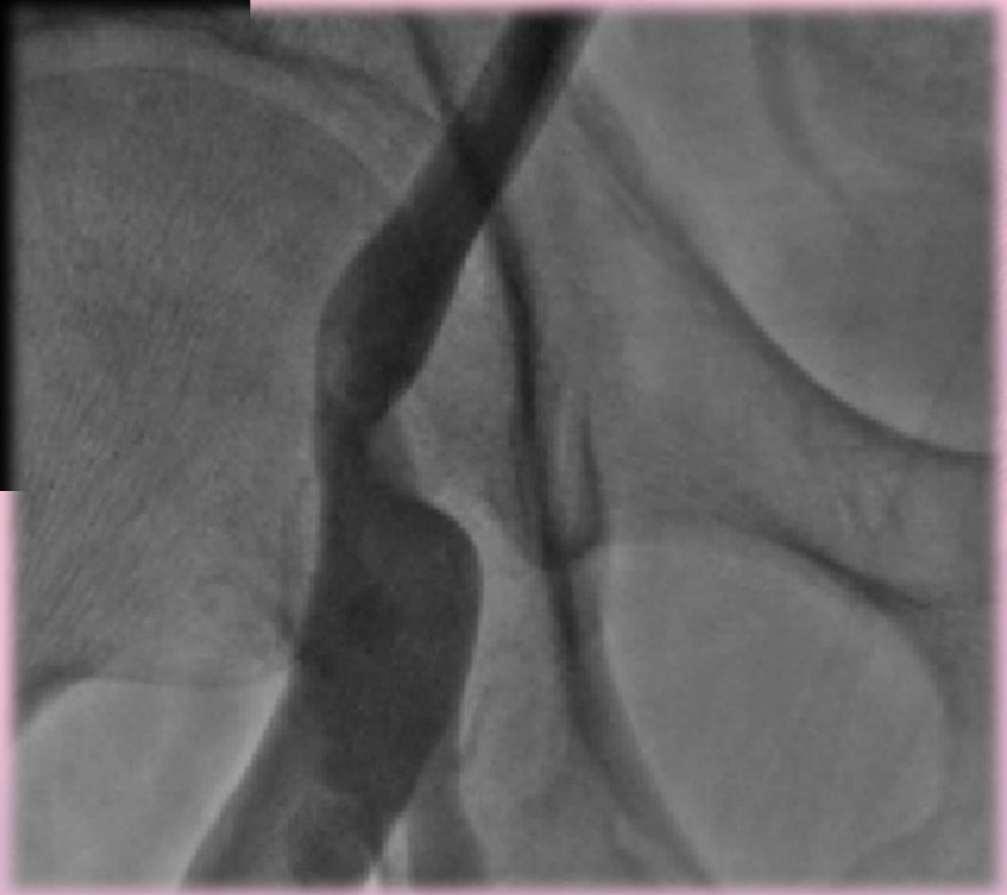
- Associated with a patch in most cases

We prefer to perform an endophlebectomy associated with stent insertion, not only for the iliac district but also for the common femoral vein

This technique prevents:

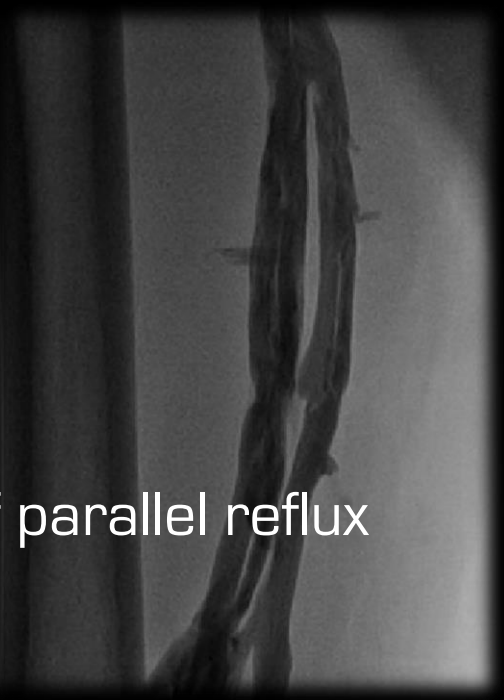
- Subinguinal compression

- Common femoral collapse



Other associated actions are directed to preventing:

- Post-procedure dilatation

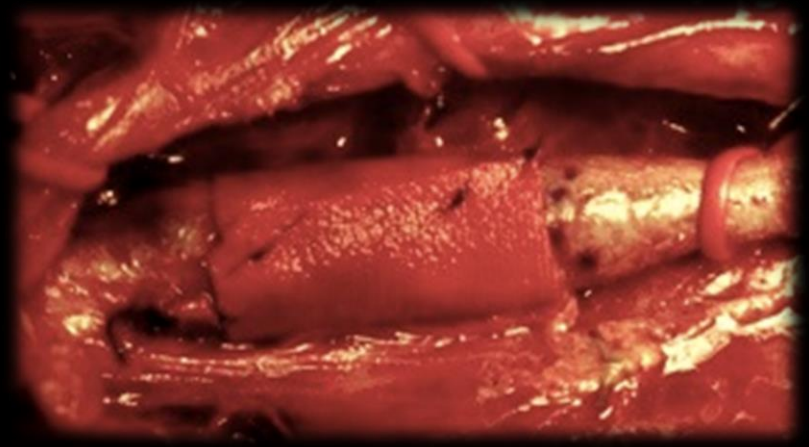


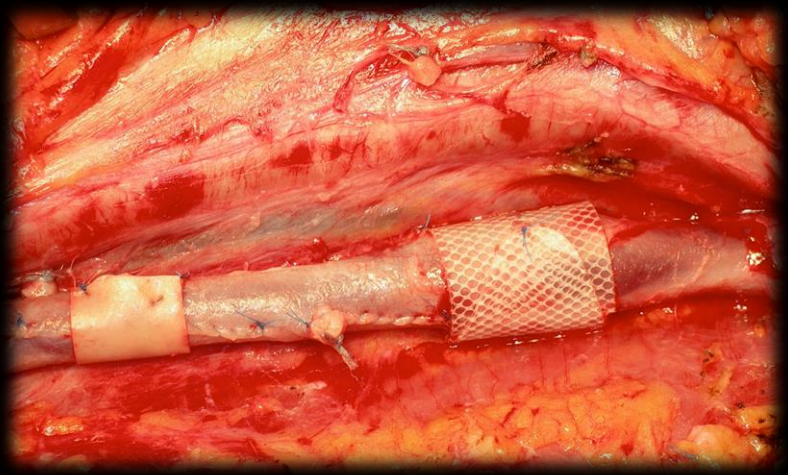
- Correction of parallel reflux

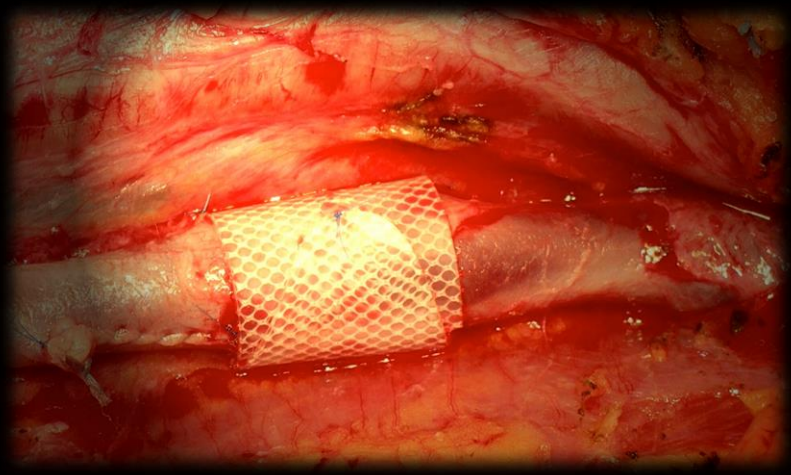
The most common method for preventing post-procedure dilatation is to apply a band or a cuff:

- biological

- synthetic





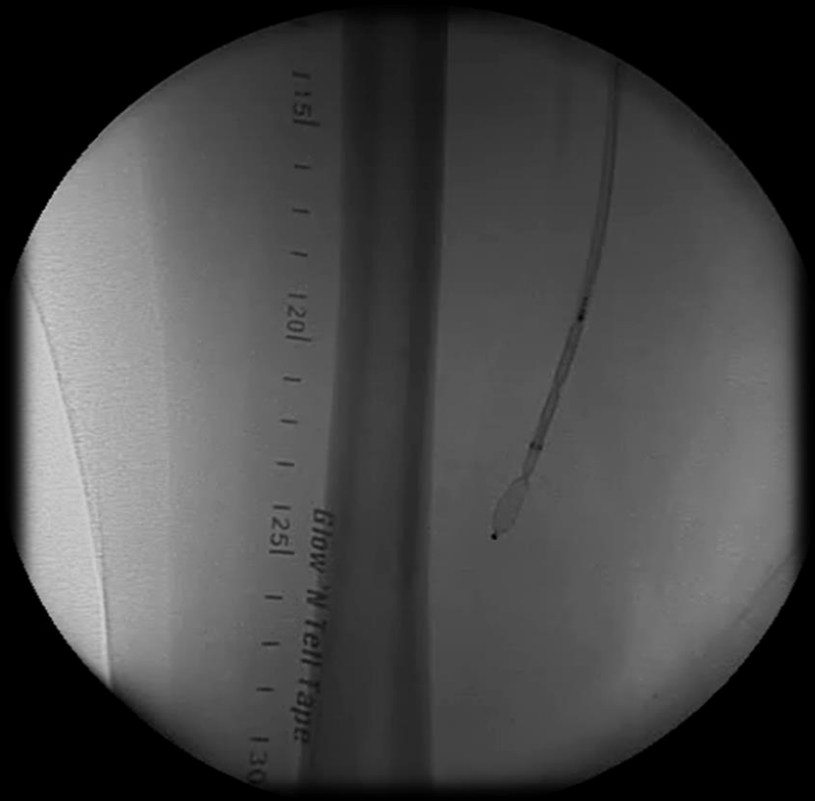


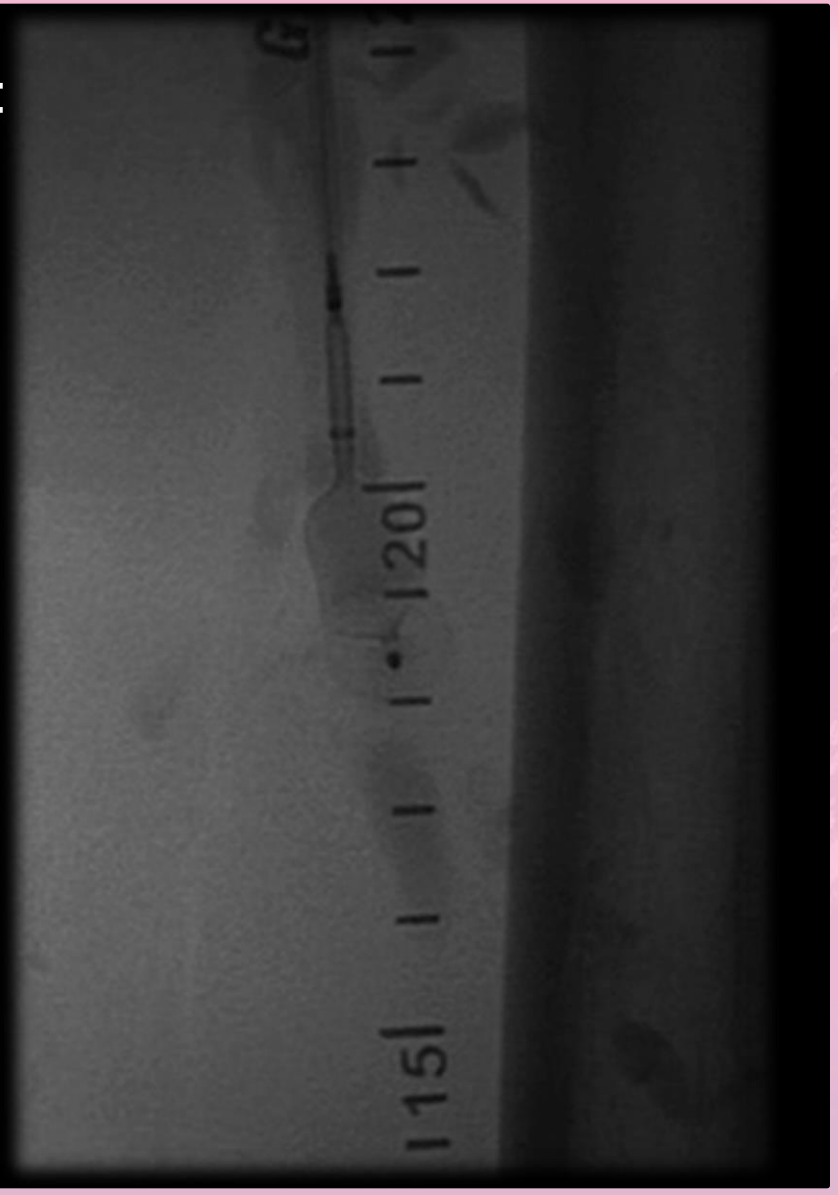
The limit is that it modifies the shape of the sinus

To prevent using an external biological spiral

The correction of parallel refluxes:

- Endovascular occlusion





The advantages are:

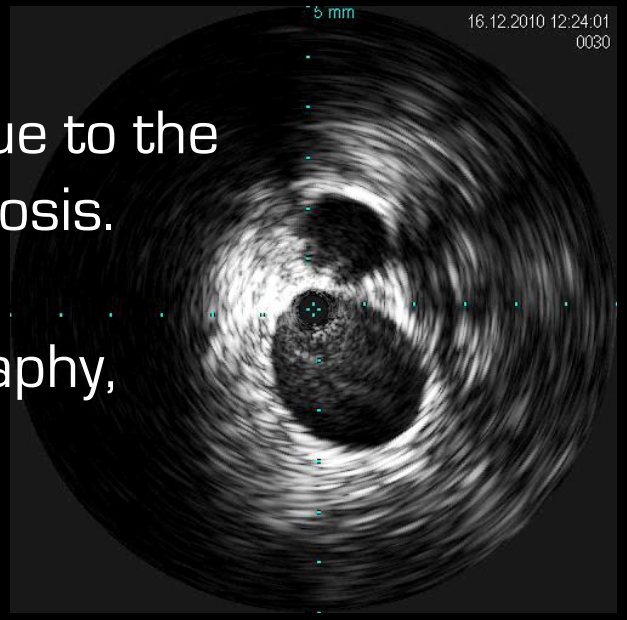
- Transcutaneous approach
- Repeatable
- Performable at distal point

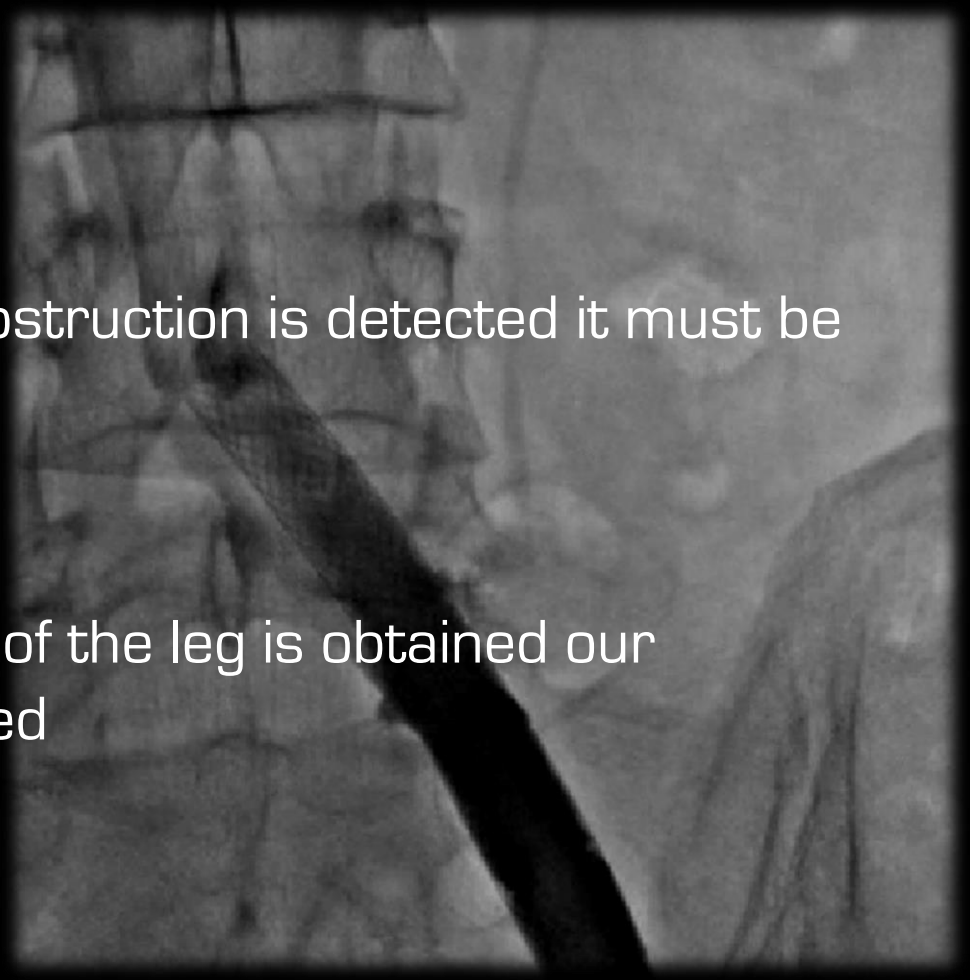
When should we use these techniques?

1) Remember that severe C.V.I. is an incapacitating disease and has a high social cost

2) C3-C6 patients must be investigated due to the limits of US in making an exhaustive diagnosis.

Additional investigations (air plethysmography, venography, IVUS) are needed.





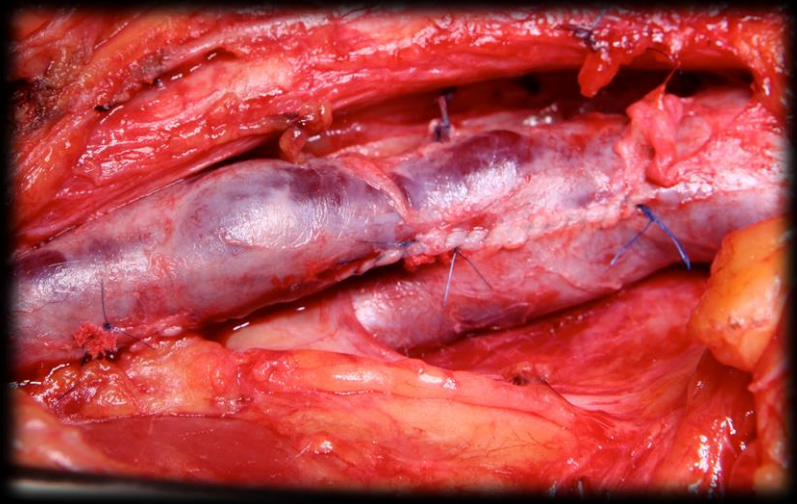
3) When a proximal obstruction is detected it must be treated first

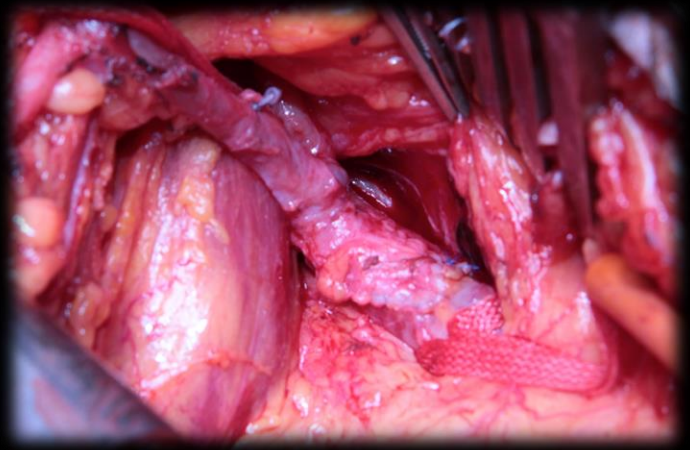
4) If the re-equilibrium of the leg is obtained our mission is accomplished

5) If not, open surgery can be advisable

- To correct possible obstruction at common femoral level

- To correct non-compensated obstruction at femoral level





- To correct the reflux

In at least half of patients we cannot obtain good results without correcting the reflux

Conclusion

Regardless of technique we must abolish the reflux

Thank you