

## Small Saphenous Vein Ablation: Nuances and Booby Traps

**Jean Luc Gerard, M.D.**

Vascular Physician  
Henry Mondor University Hospital  
Paris, France

## ENDOVENOUS LASER ABLATION OF THE SMALL SAPHENOUS VEIN: RISK OF PARESTHESIA?

Dr Jean Luc GERARD: University Hospital Henri Mondor, vascular surgery department  
Créteil, France

### INTRODUCTION

During the traditional surgery of the small saphenous vein (SSV) the risks to damage the nerves is important and most of the surgeons avoid stripping the entire vein and carry out mostly just a high ligation resection.

### ENDOVENOUS LASER PRINCIPLE TREATMENT:

is based on a thermal process:

- conversion of light into heat
  - ★ Light energy is targeted, absorbed by the haemoglobin and water, (for 980 nm) and transformed into heat.
- A transfer of heat
  - ★ Firstly: the blood
  - ★ Secondly: the vein wall
- Result: An alteration of the proteins constructing the entire vein wall (3 layers)

### PREVIOUS MAPPING

by ultrasound guidance

- To locate the nerves (sciatic nerve always visible in the popliteal fossa)
- To locate the termination of SSV
  - Separate
  - Common with gastrocnemius vein or giacomini vein

### ENDOVENOUS LASER VEIN SYSTEM (ELVeS)

- In a consulting room
- Percutaneous introduction by ultrasound guidance from the lateral malleolus or at the lowest part incompetent vein
- Local anaesthesia and **never** under spinal anaesthesia or general anaesthesia (the patient must be able to tell during the procedure his feeling).
- 600 µm or 360 µm fibre; 980 nm diode laser
- Continuous mode
- Power decreasing from the upper part (11 watts) to the lower part of the leg (2 watts)

### CONCLUSION

- Endovenous laser in ambulatory in a consulting room
  - Efficient
  - Safe for the nerves
  - Slight invasive method
  - Slightly painful
- Attractive alternative method to varicose surgery because
  - Reduces the cost of the hospitalisation
  - Reduces the amount of time needed off of work