

## **Pacing and Defibrillation Lead Exchange without Vein Puncture.**

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**Background:** During lead implantation venous access is generally achieved by puncturing the Subclavian or Axillary Vein. Sometimes, although rarely, after lead positioning, the lead must be changed because of its inadequate mechanical stability or poor pacing parameters.

This report concerns a technique of lead exchange that avoids an additional vein puncture.

**Method:** The tip of the lead, that has to be replaced, is retracted from the right atrium or ventricle into the Superior Vena Cava; the lead insulation is lanced along a few millimeters; the straight flexible tip of the guide wire is inserted between the insulation layer and the conductor of the lead. Then the lead is advanced, while the guide wire is driven in, until the tip of the guide wire is in the Superior Vena Cava. At this point the tip of the guide wire, gently retracted from its position, is released in the vein lumen. Subsequently the lead is completely extracted from the vein but the guide wire is maintained inside it. A dilator with a mounted peel-away sheath is advanced over the guide wire. The lead positioning follows in the usual manner.

**Results:** Three (2.2%) of the 139 implanted defibrillator leads and 13 (3.3%) of the 391 pacing leads were replaced. All the procedures were successful; their mean time was  $2 \pm 1$  minutes.

**Conclusion:** This technique is successful and safe in providing vein access using the previously implanted lead, thus avoiding the need to repeat the puncturing of a vein.