










Complications in managing the femoral puncture site with Z-stitch

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Introduction: Crucial aspect of invasive electrophysiology procedures is the safe and effective closure of venipuncture sites.^{1,2} The Z-stitch is a relatively novel method designed to achieve faster and more effective haemostasis compared to manual compression, which is now rarely used. It allows patients to ambulate six hours post-procedurally and, in the absence of contraindications, be discharged the following day. The Z-stitch is employed in electrophysiology procedures during which the unfractionated heparin was used. However, it has potential drawbacks, including localized skin trauma, patient discomfort, and hematoma formation. A possible complication is the damage of the venous introducer sheath during the Z-stitch placement.

Case report: This case presents a 36-year-old patient hospitalized due to recurrent wide-QRS complex tachycardia. During hospitalization, an electrophysiology study and radiofrequency ablation were performed successfully. However, during the placement of the Z-stitch, to be exact during the removal of the 5Fr venous introducer, the introducer sheath was damaged, likely caused by needle trauma during the Z-stitch placement. X-ray imaging confirmed that the introducer's segment was located subcutaneously, but not intravascularly. After localizing the segment, a 5 mm skin incision was made, and the segment was surgically removed. A skin suture was placed at the incision site, and the venipuncture site was closed using a Z-stitch. The complication was exacerbated by the simultaneous removal of all venous introducers, which should ideally be removed individually, starting with the larger ones. This method minimizes complications and allows for easier detection of introducer damage by the operator and the assistant.

Conclusion: The collaboration of the medical team plays a critical role in preventing complications. If complications arise, prompt and appropriate intervention can resolve them without lasting harm to the patient. Continuous education of medical staff is essential to ensure procedural safety. This case underscores that the risk of complications extends beyond the procedure itself and can occur at any stage, from the initial intervention to the patient's discharge.

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LITERATURE

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