# SLIPPED GUIDE WIRE – CENTRAL VENOUS CANNULATION – AN UNUSUAL PRESENTATION

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**ABSTRACT:** Central venous cannulation via the internal jugular vein is commonly used in critically ill patients. Numerous complications of this procedure including embolization / infections of a fragment of guide wire and its retrieval by interventional radiological techniques are well known. We report a case of a lost guide wire into the venous circulation during central venous cannulation, which was retrieved surgically.
**KEY WORDS:** Central venous cannulation, complication, guide wire.

**CASE REPORT:** A 50 year old male admitted for fever with septicemia in Male Medical Wards was shifted to ICU. Jugular central line was planned. Under local anesthesia & under strict aseptic precautions right internal jugular vein was cannulated with Seldinger technique & guide wire was passed. While the sheath was removed, guide wire slipped into the vein. Attempts to retrieve guide wire failed. The ICU resident did not reveal it to seniors immediately. After initial improvement for 2 days patient again developed fever & rigors. Chest x-ray showed a suspicious lesion? Foreign body in chest, further CT scan revealed long radio opaque shadow (?Guidewire) extending upto the liver. During further discussions about the procedure the ICU resident revealed about the problem he faced.

Since the guide wire is seen extending into the liver. The patient was heparinised (LMWH 3500IU, bid) & was taken up for retrival of guide wire on the next day. Exploratory laparotomy using C-arm was planned. Right subcostal approach was chosen. With the aid of C-arm the tip of guide wire was localised 1cm deep at the superior surface in right lobe of liver. A 1cm incision was given on Glisson's capsule & the tip of guide wire protruded through the incision. The guide wire was carefully extracted in toto. Complete removal of the guide wire was confirmed with post-op chest x-ray. Patient was discharged on 7th Post-op day without any complications.

**DISCUSSION:** Of the various complications of Central Venous Cathererization described, here we report an unusual complication of slippage of guide wire.

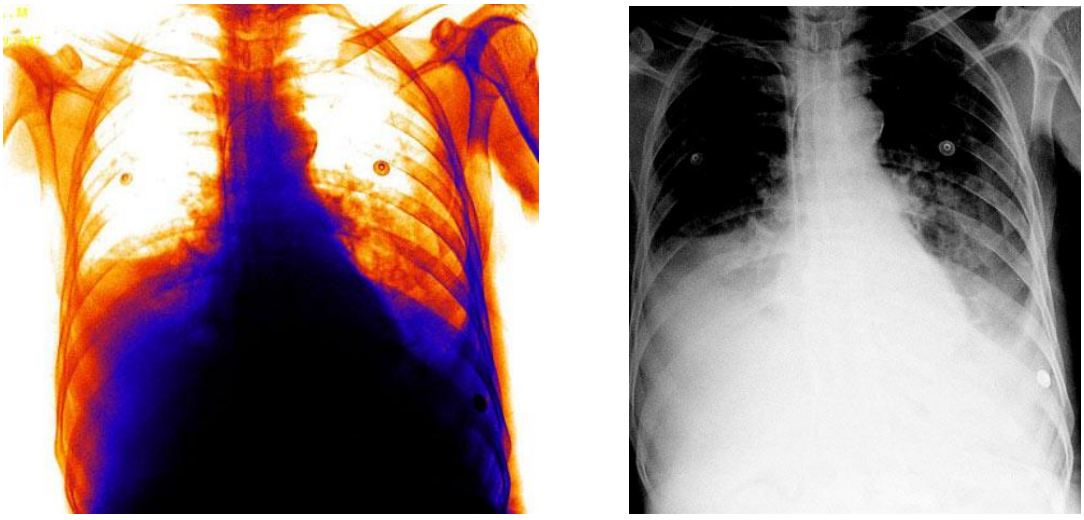
To avoid such complications:

- Such interventional procedures should be performed under supervision of senior consultant.
- A quiet environment is required to minimize distraction to the operator.
- Ensure adequate length of the guide wire outside the patient sufficiently exceeding the length of the catheter and the dilator.
- The tip of the guide wire should be kept in hand of the operator or assistant at all times throughout the procedure.

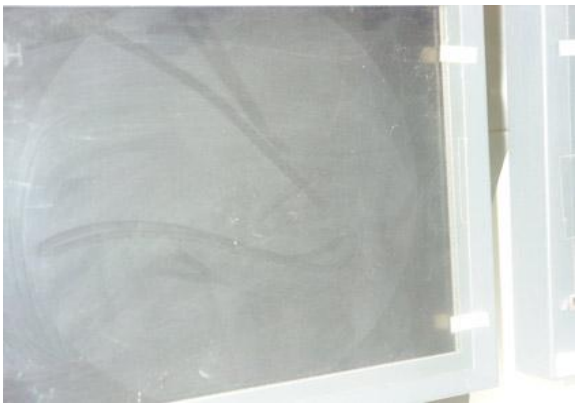
- Make sure that the guide wire is visible at its proximal end before advancing the catheter or dilator.
- After the guide wire is inserted, and the dilation is done, clamp a haemostat to the proximal end, to secure it stays outside the body.
- Ensure the presence of the guide wire in the set after completing the procedure.
- Post insertion X-ray should be routinely performed.
- Any complications which must be reported to senior consultants without hesitation in best interest of patient.

**REFERENCES:**

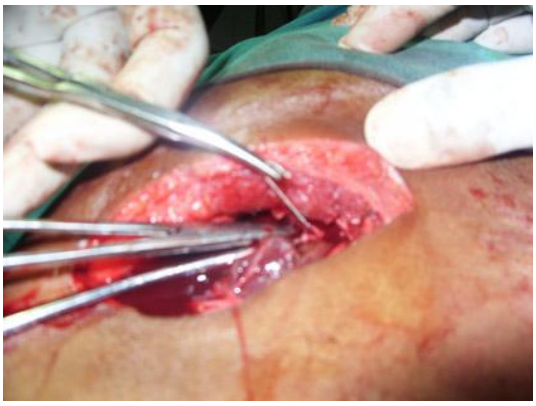

1. Omar et al.: Missing the guide wire: an avoidable complication. International Archives of Medicine 2010 3:21.
2. Mansfield PF, Hohn DC, Fornage BD, Gregurich MA, Ota DM: Complications and failures of subclavian-vein catheterization. N Engl J Med 1994, 331:1735-8.
3. Yedlicka JW Jr, Carlson JE, Hunter DW, Castañeda-Zúñiga WR, Amplatz K: Nitinol gooseneck snare for removal of foreign bodies: experimental study and clinical evaluation. Radiology 1991, 178:691-693.
4. Dondelinger R, Lepoutre B, Kurdziel J: Percutaneous vascular foreign body retrieval: experience of an 11-year period. Eur J Radiol 1991, 12:4-10.
5. Andrews RT, Bova DA, Venbrux AC: How much guide wire is too much? Direct measurement of the distance from subclavian and internal jugular vein access sites to the superior vena cava-atrial junction during central venous catheter placement. Crit Care Med 2000, 28(1):138-42.

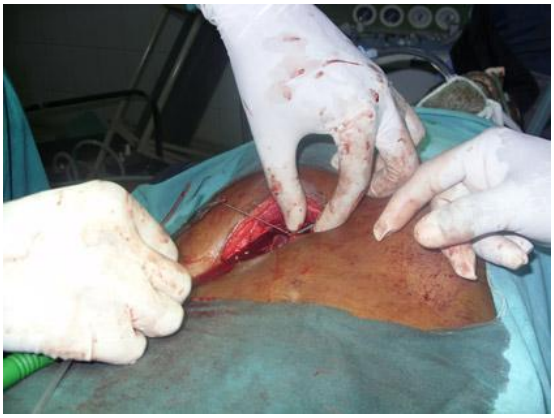
X-Ray Chest showing guide wire near Medial border Rt lung



C-Arm Picture of guide wire in liver.



Laparotomy--tip of guide wire caught from liver.



Guide wire being pulled out

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