Med & Health Dec 2017; 12(2): 375-377 https://doi.org/10.17576/MH.2017.1202.25

LATEST TECHNIQUE

The End of Catheter Dislodgement? Three Facile Steps to Secure a Tunneled Central Venous Catheter

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ABSTRAK

Kateter Vena Cenral boleh tercabut dengan senang daripada tubuh badan. Artikel ini membincang tiga teknik terperinci yang berinovasi untuk mengelakkan berlakunya insiden kateter tercabut. Penempatan leher kateter kira-kira 1cm dari tempat kateter keluar pada bahagian kulit dengan jahitan tambahan di bahagian leher kateter membantu mencegah insiden kateter tercabut.

Kata kunci: elakkan, tiub, pusat, bergerak, selamat, vena

ABSTRACT

Central Venous Line (CVL) catheter can easily dislodge. An improvised technique in three easily reproducible steps is described in detail. The placement of the cuff approximately 1cm from the exit wound with the placement of additional sutures at the neck area helps prevent its displacement.

Keywords: avoid, catheter, central, dislodgement, secure, venous

Central Venous Line (CVL) catheter dislodgement is a known complication. The most common advice to avoid this complication is to leave the catheter cuff about one third along the tunnel and/or placing additional sutures at the

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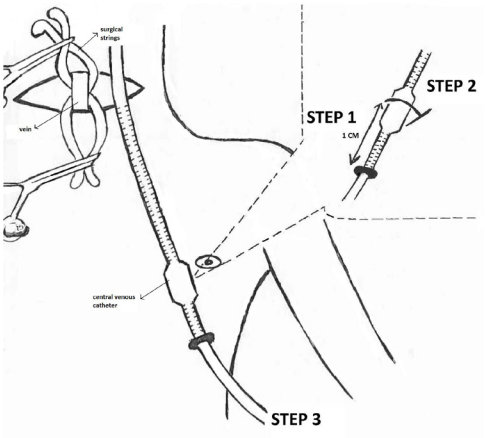

Figure 1: The vein is identified above. A 1 cm gap is attained between the cuff and the exit wound (Step 1). An absorbable suture is secured around the cuff with a cutting needle (Step 2). The catheter is tugged to ensure no free movement (Step 3).). Image is the courtesy of Dr MK Gendeh.

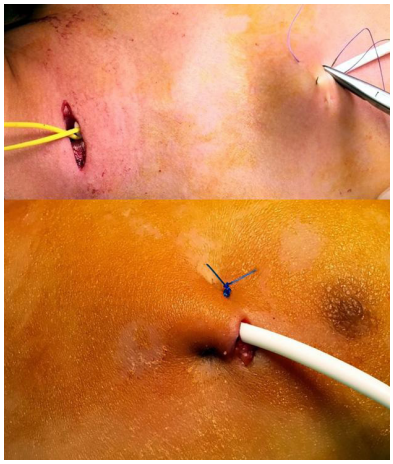

Figure 2: An absorbable suture is secured around the cuff with a cutting needle.

neck area. The author describes and improvises a technique in use for more than a decade. The technique is carried out in three simple reproducible steps. The usual placement of the cuff about one third way along tunnel is changed to approximately 1cm from the exit wound (Step 1). An absorbable suture is placed around the cuff. It is recommended to use a cutting needle of size 3/0 or 4/0 (Step 2) (Kronfli & Flettm 2013). Upon completing the knot, a gentle tug is given to the catheter (Step 3). There will be no movement of catheter upon pulling as the catheter is prohibited from exiting by the secured cuff.

Non central cuff placement in close proximity to the exit wound enables the placement of suture around the cuff under full direct vision, hence avoiding puncturing the catheter when the suture needle is negotiated around the cuff. The thin plastic nature of the catheter is an establish risk of needle perforation (Dillon & Foglia 2006).

Approximately, 1.4 to 3.6% of catheters tend to dislodge with consequences (Babu & Spicer 2002, Jumani et al. 2013). Hence, cuff securement with a suture will ensure no catheter dislodgement throughout its use. Removing the catheter will also be easy as mobilising the cuff can be done close to the exit wound since a quarter of reported complication will require catheter removal (Jumani et al. 2013).

REFERENCES

Babu, R., Spicer, R.D. 2002. Implanted vascular access devices (ports) in children: complications and their prevention. *Pediatr Surg Int* **18**(1):50-3.

Dillon, P.A., Foglia, R.P. 2006. Complications associated with an implantable vascular access device. *J Pediatr Surg* **41**(9):1582–7.

Jumani, K., Advani, S., Reich, N.G., Gosey, L., Milstone, A.M. 2013. Risk factors for peripherally inserted central venous catheter complications in children. *JAMA Pediatr* **167**(5); 429-35. (doi: 10.1001/jamapediatrics.2013.775)

Kronfli, R., Flettm, M.E. 2013. Open Insertion of Central Venous Lines and Portacaths. *In:*

Carachi, R., Agarwala, S., Bradnock, T.J. *Basic Techniques in Pediatric Surgery. An Operative Manual*. Berlin, Heidelberg: Springer, 2013, 82-83. (DOI 10.1007/978-3-642-20641-2)

Received: 22 June 2017
Accepted: 11 August 2017