

X Congresso GAVeCeLT
ACCESSI VENOSI IN PEDIATRIA
Firenze, 5 dicembre 2017

Luigi Montagnini, MD

Anestesia e Rianimazione
Ospedale Pediatrico Cesare Arrigo
Alessandria

[IRCCS Gaslini Genova]



Subcutaneously anchored
securement devices: zeroing
the risk of dislodgement



conflict of interest



Seda SpA

SecurAcath® provides improved catheter securement for the life of the line

- Prevents therapy interruption
- May improve vessel health and preservation
- Lowers total cost of patient care



SecurAcath is the only Subcutaneous Engineered Stabilization Device (ESD) that Meets the 2016 Infusion Therapy Standards of Practice*

• The new Standards state:

- ▲ Subcutaneous ESDs have been successful in stabilizing PICCs and CVDs
- ▲ Patient outcomes and patient and inserter satisfaction have been favorable
- The Standards also include a new caution to be aware of the risk of medical adhesive-related skin injury (MARS) associated with the use of adhesive-based ESDs
- ▲ SecurAcath eliminates MARS complications of adhesive-based ESDs

Dramatically Reduced Catheter Dislodgement

- SecurAcath clinical data publications show very low catheter dislodgement rates of 0-1.5%^{1,4}
- Adhesive securement devices have published dislodgement rates of 14-20%^{2,4}
- Many accidental dislodgements occur during dressing changes when catheter is not secured
- Decreased catheter replacement costs
 - ▲ PICC replacement cost is approximately \$500 at bedside, \$1000 in IR, \$1200 in pediatrics



FOLD



INSERT



SNAP

Decreased Catheter Movement

- Catheter movement at the insertion site can introduce bacteria beneath the skin¹⁰
- Improved stability may promote healing at insertion site, which acts as a natural barrier to infection
- May reduce phlebitis, thrombosis and infection

Improved Efficiency

- One SecurAcath secures for the life of the line
- Catheter remains secure during dressing changes
- Saves time during routine dressing changes
 - ▲ Dressing change can be done 3-5 minutes faster
- Allows easy catheter repositioning if catheter tip must be pulled back

360-Degree Site Cleaning While Secured

- Excellent cleaning access around the entire insertion site
- Catheter remains stable and secure during cleaning
- Improved stability and cleaning may help reduce infections

No Needle Sticks

- Eliminates costly suture needlestick risk
- Average cost of needlestick injury is \$825^{11,14}
- There are over 92,000 suture needlestick injuries to healthcare workers in the U.S. each year¹⁵

SecurAcath® – For the Life of the Line

Find out more at www.securacath.com

Download the SecurAcath App



360° SITE CLEANING



PICC LINE



CENTRAL LINE

- elderly
- restless children
- patients with skin lesions/disease

www.securacath.com

www.seda-spa.it

*Journal of Infusion Nursing, Vol. 29, No. 15, Jan/Feb 2016

what we already know [1]

- Use a sutureless securement device to reduce the risk of infection for intravascular catheters.
- Catheter stabilization is recognized as an intervention to decrease the risk for phlebitis, catheter migration and dislodgement.



**Guidelines for the Prevention of
Intravascular Catheter-Related
Infections, 2011**

what we already know [2]

- Consider use of an engineered stabilization device (ESD) to stabilize and secure VADs as inadequate stabilization and securement can cause unintentional dislodgment and complications requiring premature VAD removal.
- Avoid use of tape or sutures, as they are not effective alternatives to an ESD. Sutures [...] increase the risk of catheter-related bloodstream infection.
- Sutures were associated with fewer complications when compared to use of tape with PICCs in pediatric patients in a randomized, controlled trial that excluded use of stabilization devices.

what we don't [really] know

- Reliable data about dislodgement

EVENT & CVAD TYPE	Proportion of Complications			
	Studies	CVADs	Outcomes	Pooled %
Dislodgement/migration				
All	39	9784	686	4.7
PICC	14	5389	389	5.4
Umbilical	1	140	4	2.9
Nontunnelled	2	1126	91	3.5
HD	3	264	14	8.8
Tunnelled	8	963	89	7.0
Totally implanted	11	1902	99	2.0

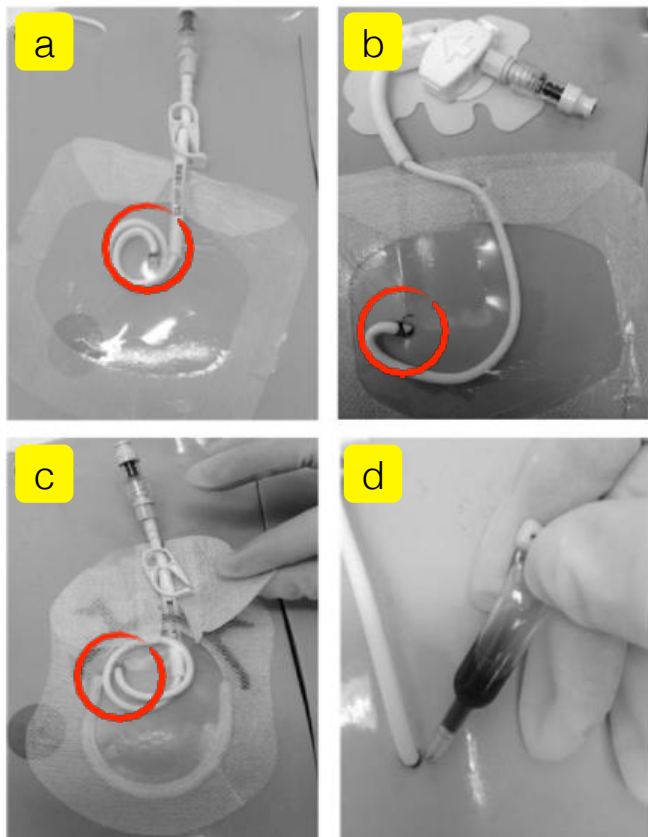
RESEARCH ARTICLE

Open Access



Innovative dressing and securement of tunnelled central venous access devices in paediatrics: a pilot randomised controlled trial

Amanda J. Ullman^{1,2*}, Tricia Kleidon^{2,3}, Victoria Gibson^{2,3}, Craig A. McBride^{2,4,5}, Gabor Mihala^{2,5,6}, Marie Cooke^{1,2} and Claire M. Rickard^{1,2}



- a. Suture + polyurethane dressing
- b. Sutureless device + polyurethane dressing + suture
- c. Suture + SorbaView
- d. Tissue adhesive + polyurethane dressing

n = 48, dislodgement 4-9%

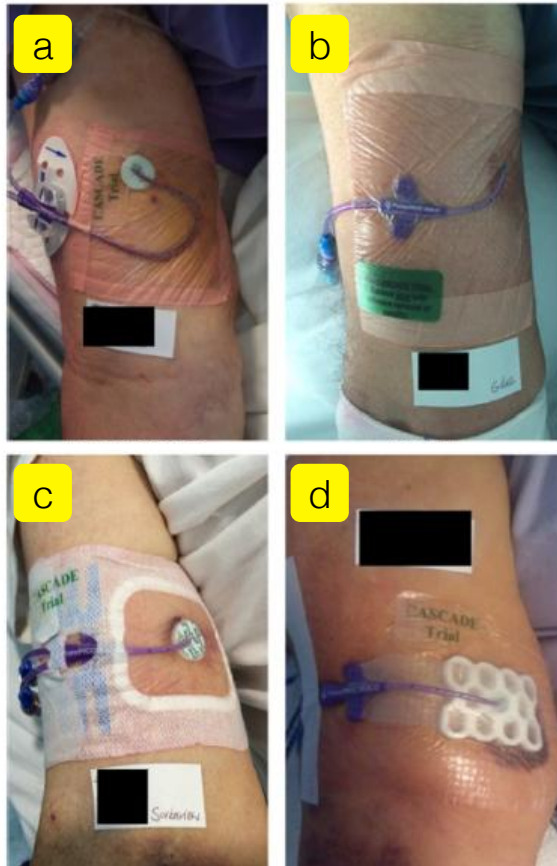
RESEARCH

Open Access



Central venous Access device SeCurement And Dressing Effectiveness for peripherally inserted central catheters in adult acute hospital patients (CASCADE): a pilot randomised controlled trial

Raymond J. Chan^{1,2,3*}, Sarah Northfield^{1,2,3}, Emily Larsen^{1,3}, Gabor Mihala^{2,3}, Amanda Ullman^{1,3}, Peter Hancock¹, Nicole Marsh^{1,3}, Nicole Gavin^{1,3}, David Wyld^{1,2,4}, Anthony Allworth¹, Emily Russell¹, Md Abu Choudhury³, Julie Flynn^{1,3} and Claire M. Rickard^{1,3}



- a. Polyurethane dressing + sutureless device
- b. Polyurethane dressing + tissue adhesive
- c. SorbaView
- d. Polyurethane with absorbent lattice pad adhesive + non-woven tape

n = 121, dislodgement 4-20%

SecurAcath for securing percutaneous catheters. NICE Medical technologies guidance, 2017

- The case for adopting SecurAcath for securing peripherally inserted central catheters (PICCs) is supported by the evidence.
- SecurAcath is easy to insert, well tolerated, associated with a low incidence of catheter-related complications and does not usually need removing while the catheter is in place.
- Cost modelling shows that SecurAcath is cost saving compared with adhesive securement devices if the PICC remains in place for 15 days or longer.
- Annual savings across the NHS in England from using SecurAcath are estimated to be a minimum of £4.2 million.



NICE National Institute for
Health and Care Excellence

@ Gaslini

Year	Catheters	N° / month	Dislodgement	%
2015 *	196	24.5	27	13.7
2016	225	18.8	11	4.8
2017 **	137	22.8	4	2.9

*8 months **6 months

Catheter Type	Total	Dislodgement	%
Broviac	99	24	24.2
Proline	190	7	3.6

L'Azienda Ospedaliera "San Antonio degli Sbadati"
presenta *Samuele Vivace* in

"Dottore, ho perso il CVC"

basato su una storia vera



con la partecipazione di

Samuele

un bambino agitato

Luigi

un anestesista poco accorto

Gloria

un'infermiera sbadata

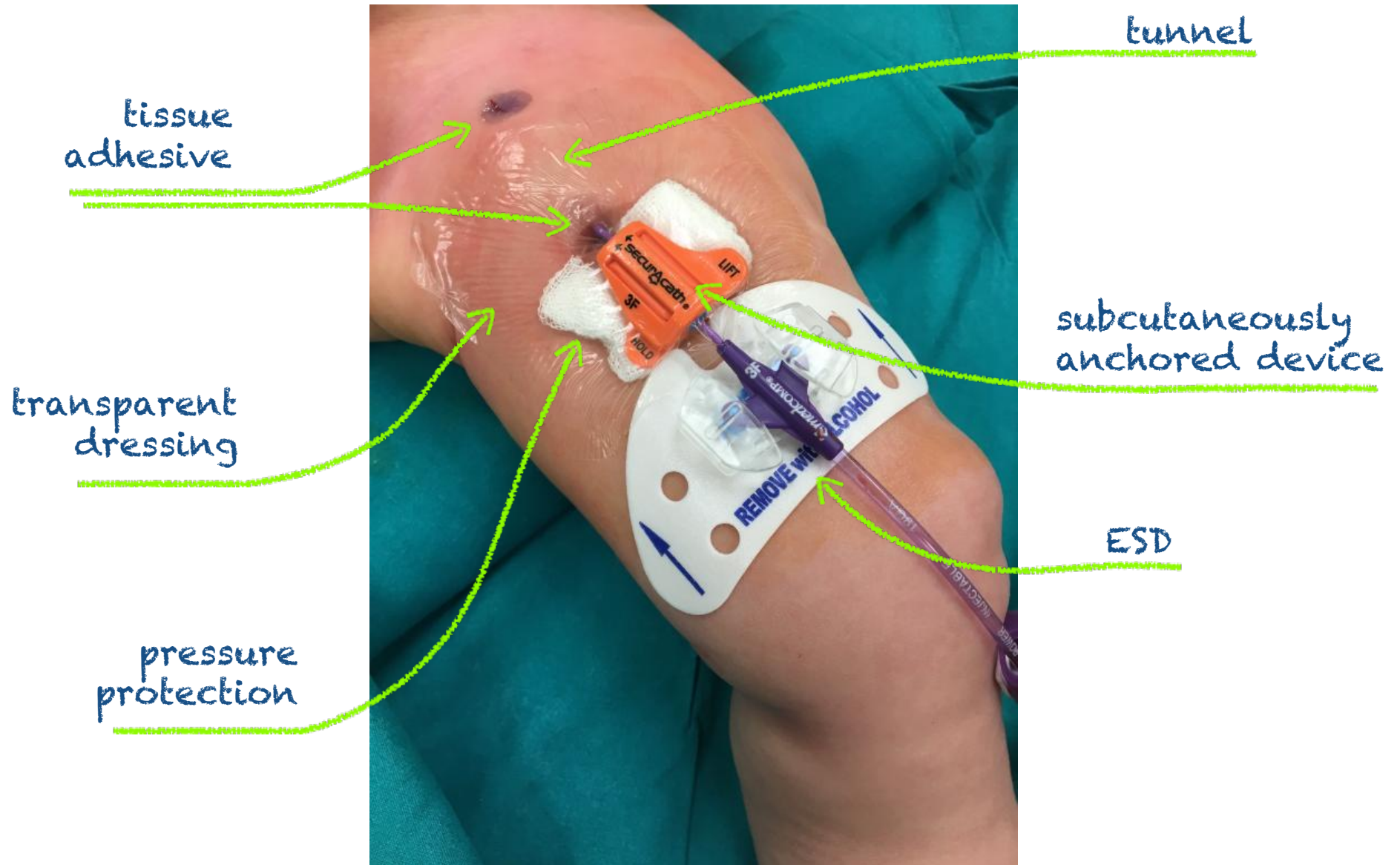
Mario & Pina

due genitori molto,
ma molto, esasperati...

- Pronto, anestesista.
- Dottore buongiorno, sono Gloria della pediatria.
- Buongiorno, mi dica.
- La chiamo per Samuele Vivace, non so se lo conosce...
- Altroché, quello con le vene impossibili, gli ho messo un femorale ieri.
- Appunto, dottore, la chiamo proprio per questo, ha perso il CVC...
- 🤩🤨🤨🐷🍌💣💀💩 !

?





what do we need to better understand?

- Is it worth to adopt SecurAcath for every patient?
- Is SecurAcath attributed pain an actual problem?
- Is nitinol truly guiltless?



conclusion



- Is catheter dislodgement an avoidable problem?
- Is it possible to reduce catheter dislodgement to zero?

