French nurses are allowed to place central venous catheters

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Abstract

In France, the placement of Central Venous Catheter (CVC) is exclusively a medical act while in other countries; nurses are authorized to place these devices (1).

Objective

Estimate the nurses and anaesthesiologist nurses' capacity to place catheters to be able to implement a medical nursing cooperation in the Anesthesia Department

Methods

During the year 2010, 3 part-time nurses were trained to puncture the veins under echography. The patients were informed about the possibility of placement by a nurse. Before the insertion, the operator came and collected the patient's consent. During the period 2010/02-2014/12/31, the nurses placed CVC(Plastimed 5F, BARD ports 8F, Bard PICCs) in a dedicated room, with an anesthesiologist nearby to respond to questions and to take over after. 3 attempts of punctures and in case of difficulties. The puncture was made under echo (Bard Site Rite 5, needle guide).

Results

<table>
<thead>
<tr>
<th>Type of CVC</th>
<th>Number</th>
<th>% arterielle puncture</th>
<th>% one puncture</th>
</tr>
</thead>
<tbody>
<tr>
<td>PICC</td>
<td>4127</td>
<td>0,14</td>
<td>90,5</td>
</tr>
<tr>
<td>Internal Jugular Vein</td>
<td>2553</td>
<td>0,11</td>
<td>88,0</td>
</tr>
</tbody>
</table>

No pneumothorax, No hemothorax.
No dehiscence of suture was observed

88.6% placement with only one puncture.
All the device was placed in central position in the atrioave junction with ECG method.
The doctors were called in 4,66 % of the cases; in 64% to modify the nature of planned devices, in 35% of the cases for difficulties of placement. For 50% of these, an impossibility to place the CVC was concluded and the insertion postponed to get a vascular evaluation: scanner, doppler, and to propose another site.

Conclusions

With a specific training, in a structured organization, French nurses are able to place CVC (PICC and Ports) with efficiency and without complication. 155 medical days / year were saved and reallocated by delegating CVC placement to nurses.

References

(1)Critical care and ressuscitation 2010; 12:90-95: Yacopetti Central Venous catheter insertion by a clinical nurse consultant ou anaesthetic medical staff.
Evolution of IV Team activity and calls to physicians
2010-2014
Number of attempts for CVC insertions

**PICC:**
90.5% first puncture success in the insertion of PICCs

**Ports and tunelled CVC:**
89.4% first puncture success in IJV insertion of CVC lines
Evolution of IV Team calls to physicians 2012-2014
PORT-a-CATH

0.19% or 3 carotid artery punctures

No pneumothoraxes

No dehiscence of suture
Success story

Yes, French nurses can place CVC correctly.

One medical nurse IV team since 2011: 3 nurses halftime. 70% of central venous access 155 medical days/years reallocated

Agreement from the French Health Authority: 2013/06; Law: ARS 2013/09
All punctures were made under echography (Bard Site Rite 5) and needle guide.
Could French Nurses place CVC (PICC and Ports)?

- Yes, they can!

The first French experience from a cancer disease hospital in Lyon.
Leon Berard Center