

# COMPLICATIONS ASSOCIATED WITH SUBCLAVIAN VEIN CATHETER INSERTION: THE ROLE OF NUTRITION SUPPORT TEAM

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## BACKGROUND:

- Use of the central venous route is standard practice for Total Parenteral Nutrition administration throughout the world.
- Catheter placement has a number of serious complications which, in some instances, may be fatal.
- Overall complication rate for catheter insertion: 5.7% (3 – 12%).

# Complications of central venous catheter placement

- Pneumothorax (1 - 4 %)
- Arterial puncture
- Catheter malposition
- Arrhythmias
- Air embolism
- Vascular, cardiac, pleural, mediastinal injuries
- Thoracic duct injury
- Pericardiac tamponade

*Whitman E 1996*

*Krzywda E 2005*

## Questions :

- **How can we prevent these complications, or minimize their incidence ?**
- **Is there any role to play a Nutrition Support Team, i.e. some experienced hands in the placement of central venous catheter ?**

## Aim of the study:

- **Determine the incidence of complications related to central (subclavian) venous catheter insertion in our Department,**
- **Evaluate the role of a Nutrition Support Team to preventing or keeping the incidence to a minimum.**

# MATERIAL - METHODS

- **Study:** Prospective
- **Time period:** 2 years (8/2005 – 7/2007)
- **No of patients requiring central venous access:** 350
- **Technique of insertion:** - by percutaneous puncture of the subclavian vein,  
- by the Nutrition Support Team (4 experienced physicians, 2 nurses, 1 dietitian)

## END POINTS OF THE STUDY:

- **Incidence of technical complications related to catheter insertion.**
- **Role of the Nutrition Support Team to minimize this incidence.**

# RESULTS

<b>Complication</b>	<b>No of patients</b>	<b>Treatment</b>
<b>Malposition of the catheter</b>	<b>4 (1.1%)</b>	<b>Reinsertion</b>
<b>Artery injury</b>	<b>3 (0.8%)</b>	<b>No specific</b>
<b>Local haematoma</b>	<b>2 (0.6%)</b>	<b>No specific</b>
	<b>9 (2.5%)</b>	

# CONCLUSION

- **The complication rate of subclavian vein catheter insertion is 2.5% in our Department, much lower when compared with the international standards.**
- **We believe that this low complication rate is attributable to the careful attention to technique and to the concentrating experience in the hands of few dedicated individuals forming a Nutrition Support Team.**



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