



***BACKREST ELEVATION IN
ICU***

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OUTLINE

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INTRODUCTION

- Some of the critically ill patients lying in ICU cannot support and position themselves.
- These patients are often on mechanically assisted ventilation.
- Often these patients are found lying flat



INTRODUCTION (cont)

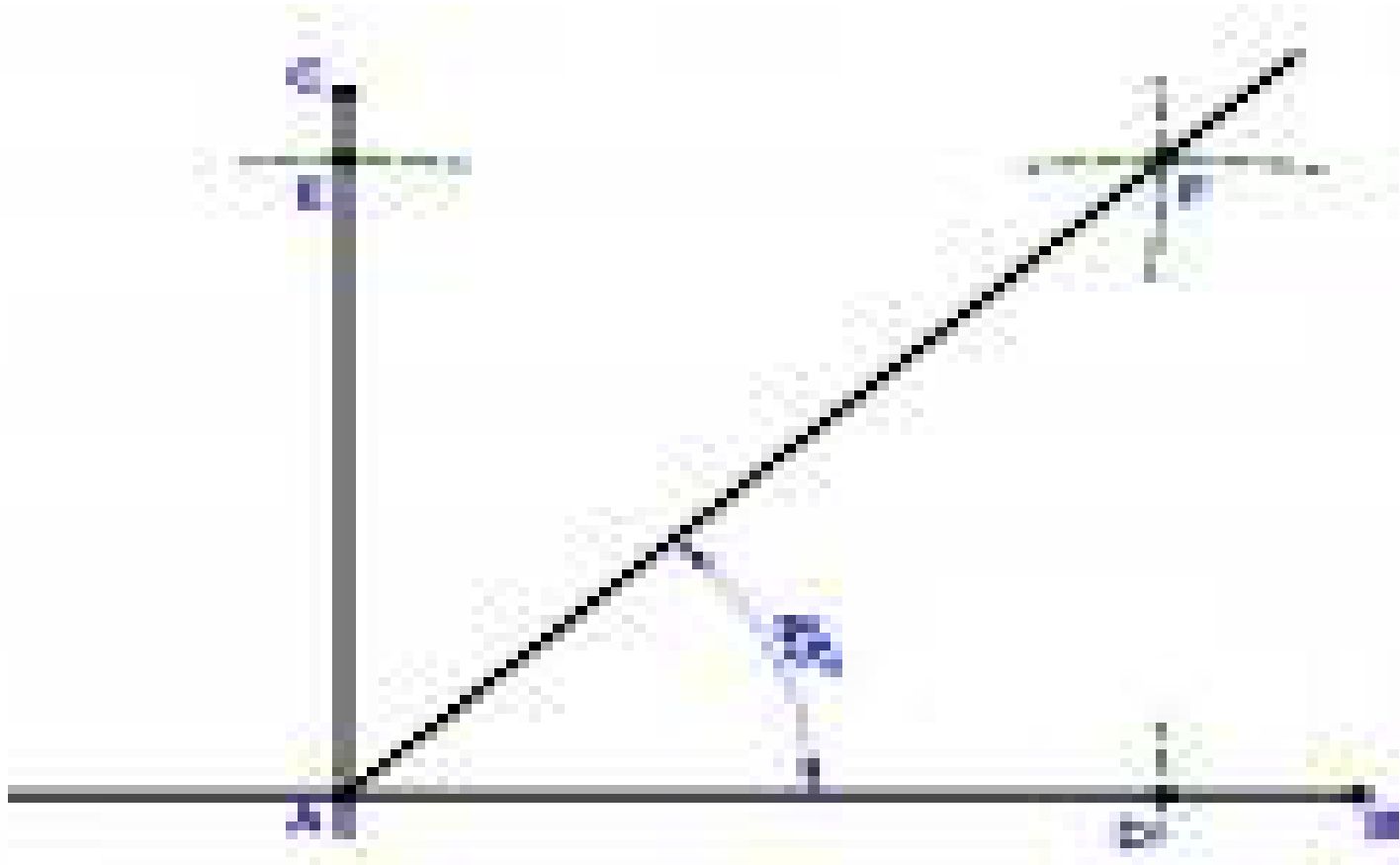
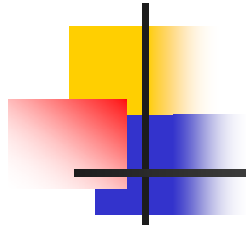
- Positioning these patients is a key component of nursing care and is an integral part of the ventilator bundle.
- It can affect the morbidity and mortality of critically ill patients.
- Elevation of the head of the bed has been correlated with the reduction in the rate of VAP, Drakulovic et al.



RECOMMENDED POSITION

- The guidelines of the Center for Disease Control and Prevention 2005.
- Backrest elevation is generally defined as elevation of bed to 30° to 45°
- Where there is no medical contraindication, this is the position of choice.

RECOMMENDED POSITION (CONT)





CONTRAINDICATIONS

- Intractable hypotension
- Vascular procedure on the neck.
- Cerebral hypo perfusion
- Cervical spine injuries and operations



EQUIPMENTS & LOGISTICS

- Modern ICU beds have indicators showing different angles.
- Angle measuring tools.
- Can use subjective estimation.
- Always make sure that cot sides are up.

EQUIPMENTS & LOGISTICS (CONT)





EQUIPMENT AND LOGISTICS (CONT)

- Positioning these patients should be the responsibility of the ICU team:
 - Nurses
 - Doctors
 - Physiotherapists, OT
 - Radiographers
 - Dieticians
 - Cleaners, Ward clerk



BENEFITS

- ↓ of gastrointestinal contents or oropharyngeal and nasopharyngeal secretion.
- ↓ of VAP
- ↓ of mortality and morbidity related of VAP
- ↓ LOS and decrease hospital costs'
- Improve patients ventilation by improving ventilatory efforts and minimize atelectasis.
- ↓ ICP and maintains CPP in patients with closed head injuries.



COMPLICATIONS OF BACKREST < 30°

- Discomfort to the patient
- Medical: -***Aspiration of gastric contents***
< (Valles et al 1995).
-***Ventilated Associated
Pneumonia (VAP)*** Kollef 1993.
- VAP place strain on ICU resources as it increases length of stay by 4.3 days.



COMPLICATIONS OF BACK REST ELEVATION 30° - 45°

- May negatively affect skin integrity ↑ the risk of pressure ulcer formation.
 - patient slides down, superficial fascia remains fixed against bed linen
 - twisted blood vessels & skin necrosis

This affects mainly the elderly & bed ridden patients .



RECOMMENDATIONS

- Consistence education to highlight the risk of lower backrest.
- Continual monitoring of backrest elevation.
- Educating patients families.
- Create an environment where ICU team work collaboratively with nursing staff to maintain head of the bed elevated
- Use of critical care beds with digital read out of backrest elevation as a feature.



CONCLUSION

- A misconception that a critically ill patient should lie in a supine position should be a story of the past.
- Several studies on the Nurses accuracy in estimation of backrest elevation, showed that nurses still lack the knowledge of importance of backrest elevation.

Windsor S and Scribante, SAJCC August, 2007, Vol. 23 No.1

Dillon et al. American Journal of Critical Care Nurses 2002.11 34-37



CONCLUSION (CONT)

- The low backrest positioning could be probably influenced by :
 - ❖ nurses convenience
 - ❖ Patients comfort
 - ❖ usually unit pattern
- Positioning of a critically ill patient in ICU is a simple and inexpensive procedure with major impact.