



اسس العناية المركزة

TRANSPORT OF CRITICALLY ILL PATIENT

Sawa University

College of health and medical techniques

Department of Anesthesia

..... Stage

جامعة ساوة الاهلية

كلية التقنيات الصحية والطبية

قسم تقنيات التخدير

.....المرحلة 2....

....محاضرة رقم 4...

Lecture No. 4

الجانب العملي

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INTRODUCTION

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- The safest place for the critically ill patient is stationary in the ICU connected to a ventilator with all infusion pumps running smoothly, intensive monitoring installed and with a nurse present to care for the patient.
- There may be situations when the patient has to leave these secure surroundings to be transported to the radiology dept., OT or to some other hospital.

TYPES OF TRANSPORT

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- ❑ **Intra hospital transport :**Transport of a patient from one location to another within the hospital , (OR to ICU, ED to ICU, ICU to CT,MRI, CATH LAB)
- ❑ **Inter hospital transport :** Transport of a patient between hospitals , (hospital to tertiary referral centre, clinic to hospital)
- ❑ **Scene run:**
- ❑ Transport of a patient from a non medical site to the nearest available or designated hospital. (crash site to the closest available hospital)

Risk :

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- Critically ill patients are at increased risk of morbidity and mortality during transport.
- Risk can be minimized and outcomes can be improved with
 1. Careful planning
 2. Appropriately qualified personnel
 3. Selection and availability of appropriate equipment.
- Because the transport of critically ill patients to procedures or tests outside ICU is potentially hazardous, the transport process must be organized and efficient.

REMEMBER ACRONYM :

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- ☐ Assessment
- ☐ Control
- ☐ Communication
- ☐ Evaluation
- ☐ Prepare and package
- ☐ Transport



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ASSESSMENT

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- Benefits must outweigh risks.
- Initial assessment of patient and situation as a whole.
- Stabilise before transport.

Degree of urgency to transfer.

Assess if the patient is stable to transfer

1. Refractory /Severe shock - high vasopressor/ inotropes.
2. Hypoxemia – high ventilator settings/Fio2 100%
3. Secure airway when in doubt – borderline indication – INTUBATE

Control, Communicate, Evaluate

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- Communication within team and receiving end.
- Continuous assessment of effectiveness of resuscitation and stabilization process

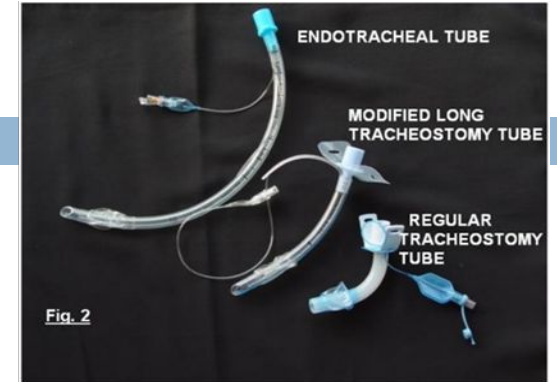


PREPARE AND PACKAGE: Preparation of patient, equipment, supplies, accompanying medical personnel

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❑ RESPIRATORY & CVS SUPPORT EQUIPMENTS

1. Oral and nasal airways
2. Facemask and bair circuit or AMBU bag
3. O2 Mask with tubing/ reservoir mask.
4. Suction equipments
5. ET tubes, stylet
6. Laryngoscope and blade
7. Boogie, LMA
8. IV cannula, syringes and needles
9. Monitor with pulse oximetry, BP, ECG waves



RESUSCITATION DRUGS

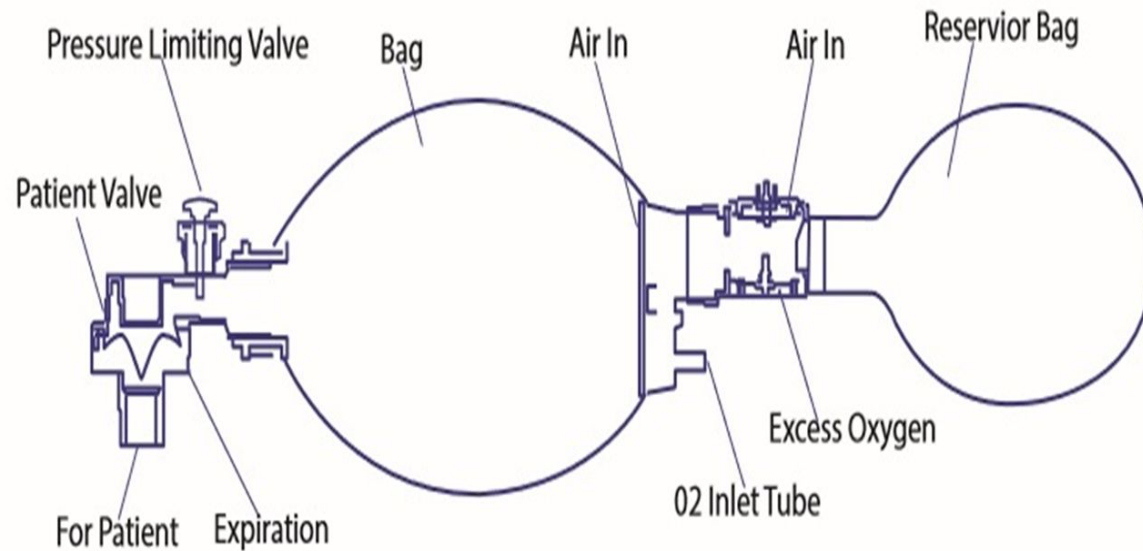
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DRUG	DOSE	QUANTITY	ACTION
Inj. propofol	200mg	1vial	Sedative
Inj. Adrenaline	1mg	2 amp	Vasopressor
Inj. Nor adrenaline	2mg	2 amp	Vasopressor
Inj. Atrac	25mg	1 amp	Sedative & muscle relaxant.
Inj. Midaz	5mg	4 amp	Sedative & muscle relaxant
Inj. Atropine	0.6mg	3 amp	Bradycardia
Inj. Scoline	50mg	1 vial	Sedative and muscle relaxant

CHECK AMBU BAG:

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- ✓ Inlet valve
- ✓ Patient valve – pressure relief valve



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CHECK BAINS CIRCUIT (Pethick Test):

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- Check for continuity of inner O2 delivery tube. If there is a breach in the inner O2 tubing, the entire corrugated limb becomes dead space. This results in respiratory acidosis, which is unresponsive to increase minute ventilation.
- CALCULATE THE AMOUNT OF O2 NEEDED TO LAST FOR THE JOURNEY

Checklist for preparation

A: airway	• Is the airway safe? If in doubt, intubate. • Cervical spine control.
B: breathing	• Portable ventilator settings. Check ABG before departure after 15min on the portable ventilator. • Self-inflating bag-valve-device in the event of a ventilator/oxygen failure. • Suction. • Adequate sedation, analgesia, and relaxation. • Adequate O₂ reserves. • Insert a chest drain if there is a possibility of a pneumothorax (e.g. fractured ribs).
C: circulation	• Stable circulation with good access. • Controlled external bleeding. • Invasive BP and CVP, when indicated. • Inotropes—if in doubt have them prepared and ready to run. • Pumps and batteries. • Insert a urinary catheter and monitor output.
D: disability	• GCS (mannitol, IPPV), pupillary signs. • Naso-/orogastric tube.
E: exposure	• Temperature loss. • Splint long bones.

TRANSPORT

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Accompanying personnel:

- It is strongly recommended that minimum 2 people accompany a critically ill patient.
- It is strongly recommended that a physician with training in airway management and ACLS and critical care training or equivalent, accompany unstable patients.



Accompanying equipment :

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- For practical reasons, bag valve ventilation is most commonly employed during intra – hospital transport.
- In mechanically ventilated patients, ET tube position is noted and secured before transport, and the adequacy of oxygenation and ventilation is reconfirmed.
- Portable mechanical ventilators are gaining increasing popularity in this area, as they more reliably administer prescribed minute ventilation and desired O₂ concentrations.

MONITORING DURING TRANSPORT:

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- All critically ill patients undergoing transport receive the same level of basic physiologic monitoring during transport as they had in the ICU.
- This includes at a minimum, continuous ECG monitoring, continuous pulse, periodic measurement of BP, pulse rate, respiratory rate.
- All battery operated equipment is fully charged and capable of functioning for the duration of transport.



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DOCUMENTATION:

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1. Clinical status before, during and after transfer
2. Patient condition – trend
3. Proper handing over referring transfer receiving doctor
4. In the end evaluate process of transfer – for quality improvement.

Adverse effects:

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Adverse events during transport of critically ill patients fall into 2 general categories:

1. Mishaps related to intensive care

- Lead disconnection
- Loss of battery power
- Loss IV access
- Accidental extubation
- Occlusion of ET tube
- Exhaustion of O₂ supply.

2. Physiologic deterioration related to critical illness

- Worsening hypotension or hypoxemia.

Quiz

Any questions?

*Thank
You*