



الكورس الاول --- اسس العناية المركزة

PREVENTIVE PRACTICES IN ICU

Sawa University

College of health and medical techniques

Department of Anesthesia

..... Stage

جامعة ساوة الاهلية

كلية التقنيات الصحية والطبية

قسم تقنيات التخدير

.....المرحلة 3....

....محاضرة رقم 6..

Lecture No. 6

الجانب العملي

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اختصاص تخدير وعناية مركزة

2.(VTE)VENOUS THROMBOEMBOLISM PROPHYLAXIS



1. Pharmacological: All patients admitted to ICU should receive pharmacological prophylaxis, either **unfractionated heparin (UFH)** or **lower molecular heparin (LMWH)** within 24 hours of admission unless contraindicated.
2. Mechanical prophylaxis.

MECHANICAL PROPHYLAXIS

- Provide mechanical prophylaxis with either intermittent pneumatic compressor (IPC) or graduated compression stockings (GCS) when pharmacological prophylaxis is contraindicated.
- IPC is preferred over GCS in patients at high risk of VTE.

- . **Contraindications to mechanical prophylaxis:**
 - a. Severe arterial insufficiency or periphery arterial disease
 - b. Congestive heart failure
 - c. Recent or acute DVT/PE
 - d. Acute fractures of the lower limbs
 - e. Loss of skin integrity
 - f. Recent skin graft
 - g. Post-operative venous ligation
 - h. Morbid obesity which makes it difficult to correctly fit the stockings
 - i. Oedema or deformity of the lower limb
 - j. Diabetic neuropathy

3. INFECTION CONTROL AND PNEUMONIA PROPHYLAXIS

- ❑ **HOSPITAL acquired pneumonia : is defined as pneumonia that occurs 48 hours or more after admission, which was not present nor incubating at the time of admission .**
- ❑ Mortality rate for HAP may be as high as 30 - 70%,

VAP

- *VAP..... 25% of all nosocomial infections in ICU.
- *VAP 20-50% morbidity and mortality.
- *VAP..... is a preventable disease.

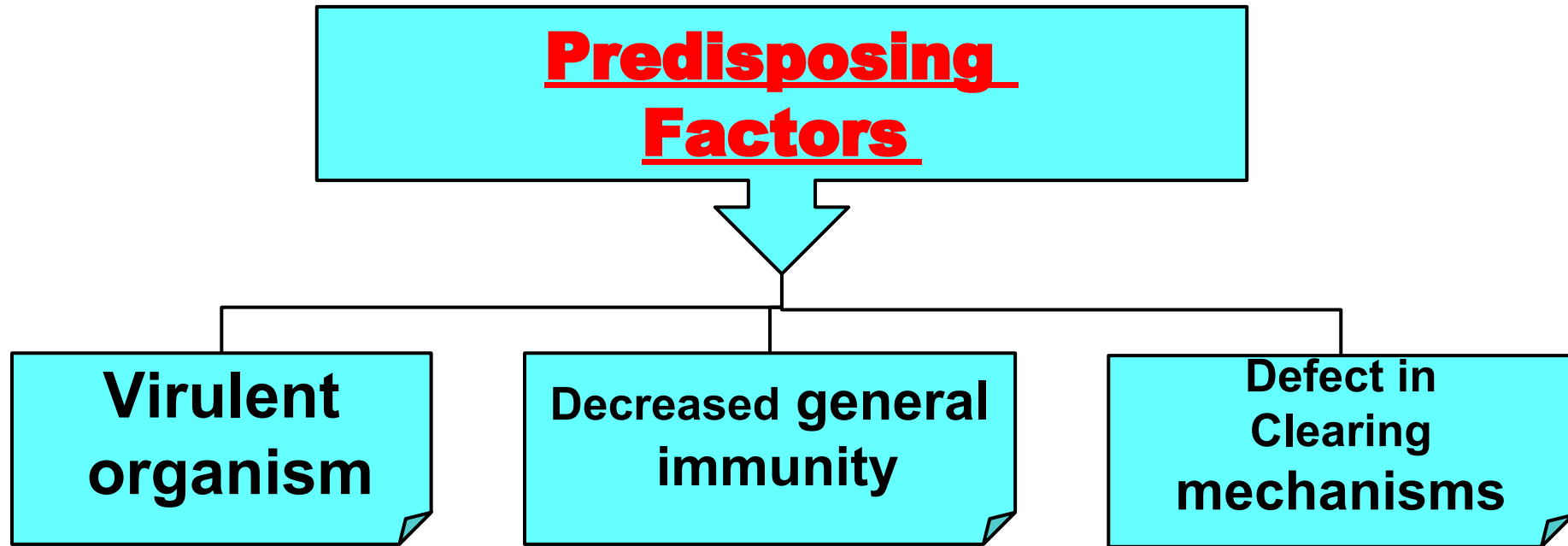
Pneumonia to occur

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graph TD; A[Pneumonia to occur] --- B[Predisposing factors]; A --- C[Source of infection]; A --- D[Organism entry into lung];
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**Predisposing
factors**

**Source of
infection**

**Organism
entry
into lung**



Defective in clearing mechanism e.g.

- cough or gag reflex lost (Coma, paralysis, addiction).
- obstructions (FB, tumors).
- pulmonary edema.
- mucosal injury aspiration, smoking.

Source of infection

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graph TD; A[Source of infection] --> B[Person to Person<br/>S. pneumoniae, TB,<br/>Mycoplasma and viral]; A --> C[Environment<br/>Leishmaniasis (water)<br/>Psittacosis (bird)<br/>Anthrax (soil)];
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Person to Person
S. pneumoniae, TB,
Mycoplasma and viral

Environment

Leishmaniasis (water)
Psittacosis (bird)
Anthrax (soil)

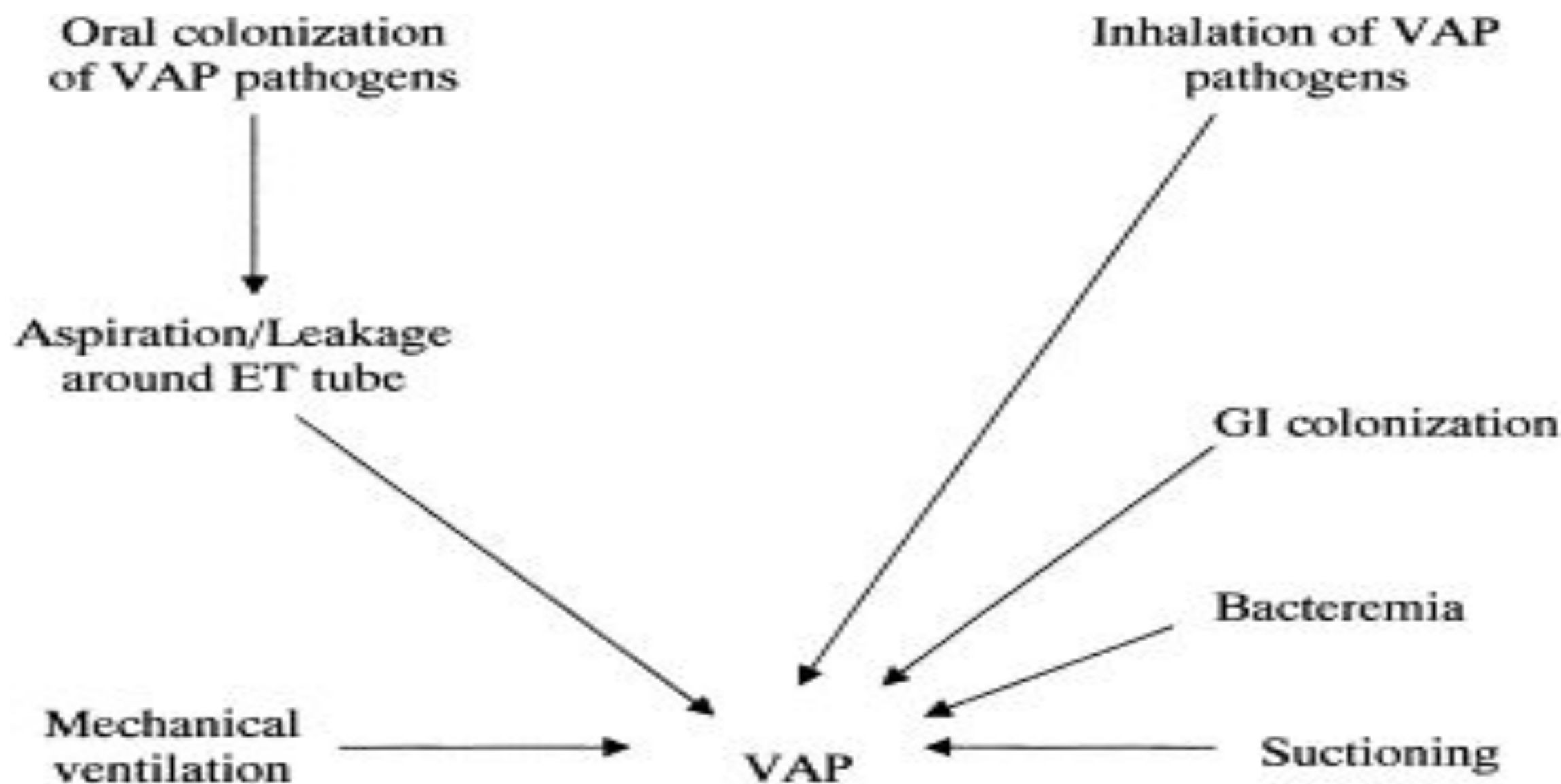
Organism entry **Into lung**

Inhalation
OR
Aspiration

Blood spread

Direct spread
OR
Colonization

1. Aspiration of oropharyngeal pathogens.
2. Inhalation of pathogens from contaminated aerosols,
3. Hematogenous spread from infected intravascular catheters ,
4. Bacterial translocation from the gastrointestinal tract lumen are quite rare.



Regimens Of Probable Efficacy For Specific Indications

- ❑ Vaccinations against s pneumonia and influenza virus.
- ❑ Hand washing between patient contact.
- ❑ Isolations patients with highly resistant organisms such as MRSA.

Regimens With Probable Effectiveness Used Widely In Some Clinical Settings

- A) **Nutritional support.**
 - Enteral feeding.**
- B) **Regimens for intestinal bleeding prophylaxis**
- C) **Putting The Patients In The Semi Recumbent Position** appear to reduce risk of aspiration.
- D) **Handling Of Respiratory Equipments:**
 - 1- Suction Catheter** single use non sterile disposal gloves should be worn for suction, And change suction catheter between patients and after each use.

2- Suction Bottles single use disposal or reusable wash with detergent, dry and disinfect them with autoclave or in washing machine.

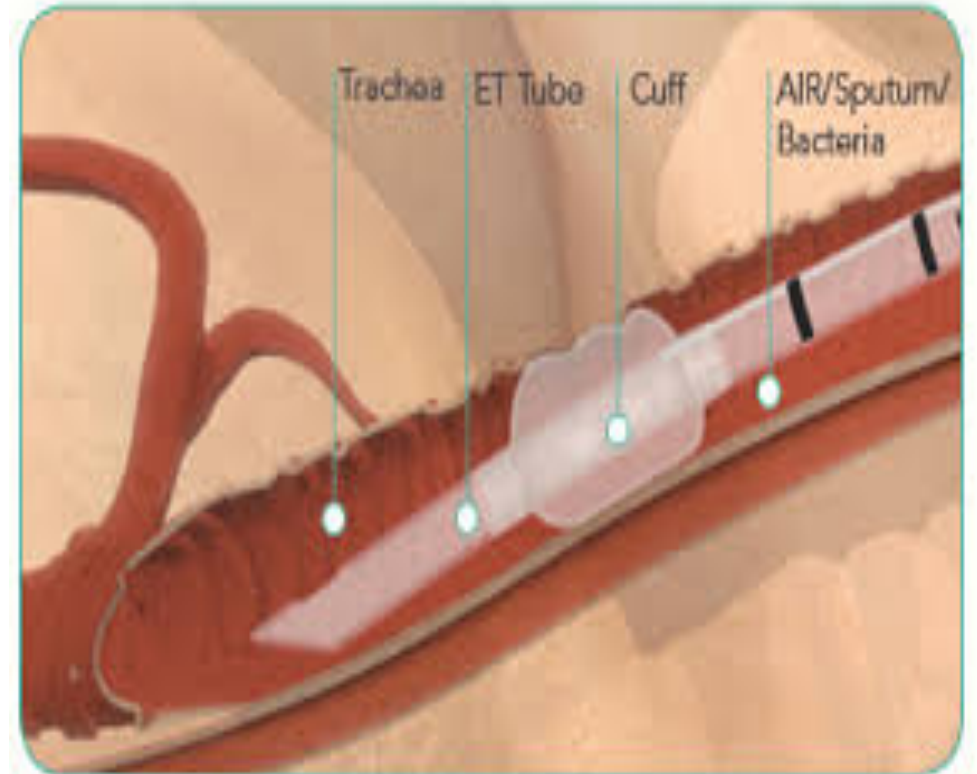
3- Breathing Circuits ventilator circuit are rapidly colonized with bacteria and condensate within these circuit can have high bacterial counts and aspiration of condensate may play a role in development of nosocomial pneumonia, so change every 48 hs, periodic drain breathing condensate.

4- Nebulizers change or reprocess devices between patients by using sterilization or high level of disinfection or use single disposal item.

5- Humidifiers clean and sterilize devices between patients and fill with sterile water which must be changed every 24 hs or sooner, if necessary single use disposal humidifiers are available.

F) Subglottic Secretion Drainage:

Secretions pooled above the endo tracheal tube cuff represent reservoir of the colonizing bacteria thus removing this pool may decrease incidence of VAP.



THANK YOU