

ANAESTHESIA

DEFINITION: LOSS OF SENSITIVITY

ANAESTHESIA:

- **ANALGESIA** *LOSS OF PAIN SENSATION*
 - **HYPNOSIS** **SLEEP**
 - **RELAXATION**
-

ANAESTHESIA ROUTES

INHALATIONAL:

**OPEN DRAP
MASK
TUBE**

INTRAVENOUS:

CANULA

REGIONAL:

**LOCAL
SPINAL**

THEORIES OF ACTION OF ANAESTHETIC AGENTS ON BRAIN CELLS

1- INTERFERENCE WITH INTRACELLULAR OXIDATION BY INFLUENCE ON OXIDATION ENZYMES LEADING TO INHIBITION OF ACTIVITY.

2- LIPID THEORY: AGENTS HAS HIGH AFFINITY TO LIPID AND SINCE BRAIN CONTAINS HIGH AMOUNT OF LIPID SO IT IS MORE SUSCEPTABLE TO THEIR ACTION.

3- CHANGES IN CELL METABOLISM: LIKE PRECIPITATION OF COLLOIDS, CHANGE IN SURFACE TENSION, CHANGE IN PERMEABILITY OF MEMBRANE , AND CHANGE IN VISCOCITY.

4- CHANGES IN ELECTRICAL POLARITY OF THE CELLS, REDUCTION IN FREQUENCY AND VOLTAGE OF ACTION POTENTIAL.

5- THE INERT GAS EFFECT: COMPETITION OF GASES AND VAPOURS WITH O₂ IN BRAIN CELLS.

6- THE HYDRATE MICRO-CRYSTAL THEORY: ANAESTHETIC MOLECULE ACT AS A CENTRE ABOUT WHICH WATER FORMS CRYSTALS, THIS AFFECT THE PASSAGE OF IONS THROUGH CELL MEMBRANE.

STEPS OF ANAESTHESIA

1- PREOPERATIVE ASSESSMENT

2- PREMEDICATION

3- INDUCTION OF ANAESTHESIA

4- ENDOTRACHEAL INTUBATION

5- MAINTENENCE OF ANAESTHESIA

6- MONITORING DURING ANAESTHESIA

7- RECOVERY FROM ANAESTHESIA

8- POST OPERATIVE CARE

I.V. CANULATION

1- VEINS IN THE DORSUM OF HAND

2- VEINS AROUND THE ELBOW

3- LEG VEINS

4- SCALP VEINS

5- JUGLAR VEINS

6- VENOUS CUT-DOWN

How to make a vein obvious for canulation:

1- GRAVITY EFFECT

2- RUBBER BAND, SPHYGMOMANOMETER CUFF

3- TAPPING THE AREA

4- APPLICATION OF HEAT

ENDOTRACHEAL INTUBATION

INDICATIONS:

- 1- LONG TIME OPERATIONS**
- 2- OBESITY**
- 3- PRONE AND LATERAL POSITIONS**
- 4- USE OF LONG ACTING MUSCLE RELAXANTS**
- 5- OPERATIONS IN SPECIAL SITES LIKE ENT, FASCIOMAXILLARY AND NEUROSURGERY**
- 6- IN EMERGENCY**
- 7- IN RESPIRATORY DISEASES, BETTER VENTILATION**

CLASSIFICATION OF ENDOTRACHEAL TUBES

- 1- CUFFED - NONCUFFED**
- 2- PORTEX - RED RUBBER**
- 3- ENDOTRACHEAL – ENDOBRONCHIAL (DOUBLE LUMEN)**
- 4- PLAIN - ARMoured**

SIZE = AGE/4 + 4 MM INTERNAL DIAMETER
LENGTH = AGE/2 + 12 CM LENGTH