

Endogenous Pain Suppression - Analgesia system

* System in our own body to lower the pain components

1. Periaqueductal grey & periventricular nucleus
These neurons descend down to enter 2nd comp
component
2. Nucleus raphe magnus {
2^o N originate → descend down to spinal cord
to dorsal grey horn of spinal cord.
3. Spinal cord.
it may terminate on interneuron that then
terminate in synapses [2nd & 3rd order neurons
of AS fibre-ord
synapse]

These system work on the basis of neurotransmitters.

- ① release enkephalin; stimulate 2^o n @ nucleus raphe magnus.
- ② release serotonin; stimulate interneuron @ interneuron
- ③ Interneuron release enkephalin; act on synap
b/w AS & L fibres 2nd & 3rd o.n.

Enkephalin causes: inhibition of transmission of impulses level by presynaptic inhibition & postsynaptic inhibition

i.e., Gate is closed/modulated; Gate control theory.

Another Analgesia System

Aβ fibres are myelinated fibres sensing touch and pressure.

As soon as they enter spinal cord enter dorsal ^{grey} horn of SC. they give a collateral.

When Aβ stimulated → collateral ~~interacts~~ cause presynaptic inhibition → redⁿ in release of neurotransmitters

ie, physiological basis of

(a) rubbing when pain

(b) ~~acupuncture~~

(c) liniments

(d) acupuncture

(e) TENS

trans cutaneous

electrical nerve stimuli