

MIDBRAIN

(Crus Cerebri) C.C
massive fibrous mass

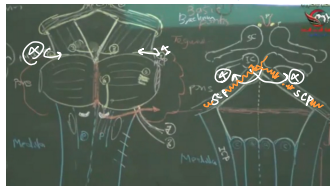
- It is a massive mass ventral to the substantia nigra.
- It consists entirely of descending cortical efferent fibers (Frontopontine, Corticospinal & corticobulbar and Temporopontine Fibres) to the motor cranial nerve nuclei and to anterior horn cells.
- Involved in the coordination of movement.
- Present in both levels of colliculi.

1. Substantia nigra

- Occupies the most ventral part of the tegmentum.
- It consists of pigmented, melanin containing neurones.
- It projects to the basal ganglia. Its degeneration is associated with Parkinson's disease.

2. Decussation of the superior cerebellar peduncles in the mid line.

- ### 3. Trochlear nucleus:
- lies in the central gray matter close to the median plane just posterior to the medial longitudinal bundle.
 - The fibers of the trochlear nerve decussate in the superior medullary velum. **M.C.Q**



ventral part (Tegmentum)

هذه تقييد على حيزي
cerebral aqueduct

dorsal part (Tectum)

INFERIOR COLLICULUS Level

- Inferior colliculus is a large nucleus of gray matter that lies beneath a corresponding surface elevation.
- It is part of the auditory pathway.
- It receives fibers from the lateral lemniscus.
- Its efferent fibers pass to the thalamus

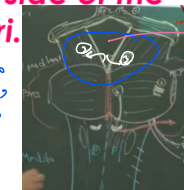
SUPERIOR COLLICULUS Level

1. Oculomotor nucleus:

- Situated in the central gray matter close to the median plane.
- The fibers of the oculomotor nerve passes anteriorly through the red nucleus to emerge on the medial side of the crus cerebri.

2. Red nucleus:

- A rounded mass of gray matter that lies in the central portion of the tegmentum.
- Its red coloration is due to its vascularity and the presence of an iron containing pigment in the cytoplasm of its neurones.
- It is involved in motor control.



nucleus موجوده ورا
والتي تفرغ في قاع (C.C)
من ال medial

inter peduncle fossa

من قاع

RETICULAR FORMATION

- It is a complex matrix of nerve fibers & small groups of nerve cells that extends throughout the brain stem.
- It has a number of important functions i.e. Respiratory and Cardio-vascular centers are located in the medullary and caudal pontine reticular formation.

- A large nucleus of gray matter that lies beneath corresponding elevation.
- It forms part of the visual reflexes.
- Its efferent fibers go to the anterior horn cells & to cranial nuclei 3, 4, 6, 7 & 11).
- It is responsible for the reflex movements of the eyes, head and neck in response to visual stimuli, as in following a moving object or altering the direction of the gaze.

Substantia nigra

cerebral aqueduct

tectum

tegmentum

