

Summary

The hypothalamus lies at the base of the brain, around the third ventricle, extending from a plane immediately anterior to the optic chiasma to one immediately posterior to the mamillary bodies. Laterally, its borders, somewhat ill-defined, are roughly the optic tract, the internal capsule, pes pedunculi, globus pallidus, and ansa penduncularis at various anteroposterior planes, while superiorly, it does not extend above the level of the anterior commissure. Its weight in the adult human is less than 2.5 gm.

The pituitary gland, or hypophysis, is an endocrine gland about the size of a pea and weighing 0.5 gm, in humans. It is a protrusion off the bottom of the hypothalamus at the base of the brain, and rests in a small, bony cavity covered by a dural fold. The pituitary is functionally connected to the hypothalamus by the median eminence via a small tube called the infundibular stem. The pituitary fossa, in which the pituitary gland sits, is situated in the sphenoid bone in the middle cranial fossa at the base of the brain. The pituitary gland secretes nine hormones that regulate homeostasis.

Female infertility has wide range of causes including ovulatory, cervical, pelvic, tubal and uterine factors. Approximately 30% of female infertility is caused by ovulation disorders which may be due to ovarian causes, or CNS pituitary causes, hypothalamic causes.

Summary

Tumors within the pituitary region are relatively common, and most are benign adenomas derived from anterior pituitary cells. These adenomas may produce syndromes of hormonal hypersecretion or may be hormonally nonfunctional.

MRI is now considered the imaging modality of choice for diagnosis of hypothalamic pituitary lesions because of its multiplaner capability and good soft tissue contrast enhancement enabling identification of small lesion.