Value of cranial mri in diagnosis of female infertility caused by hypothalamicpituitary axis lesions

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The hypothalamus lies at the base of the brain, around the thirdventricle, extending from a plane immediately anterior to the opticchiasma to one immediately posterior to the mamillary bodies.Laterally, its borders, somewhat ill-defined, are roughly the optictract, the internal capsule, pes pedunculi, globus pallidus, and ansapenduncularis at various anteroposterior planes, while superiorly, itdoes not extend above the level of the anterior commissure. Itsweight in the adult human is less than 2.5 gm.The pituitary gland, or hypophysis, is an endocrine gland aboutthe size of a pea and weighing 0.5 gm, in humans. It is a protrusionoff the bottom of the hypothalamus at the base of the brain, and restsin a small, bony cavity covered by a dural fold. The pituitary isfunctionally connected to the hypothalamus by the median eminencevia a small tube called the infundibular stem. The pituitary fossa, inwhich the pituitary gland sits, is situated in the sphenoid bone in themiddle cranial fossa at the base of the brain. The pituitary glandsecretes nine hormones that regulate homeostasis.Female infertility has wide range of causes including ovulatory,cervical, pelvic, tubal and uterine factors. Approximately 30% offemale infertility is caused by ovulation disorders which may be dueto ovarian causes, or CNS pituitary causes, hypothalamic causes.Tumors within the pituitary region are relatively common, andmost are benign adenomas derived from anterior pituitary cells.These adenomas may produce syndromes of hormonalhypersecretion or may be hormonally nonfunctional.MRI is now considered the imaging modality of choice fordiagnosis of hypothalamic pituitary lesions because of itsmultiplaner capability and good soft tissue contrast enhancementenabling identification of small lesion.