

OVARIAN HYPERSTIMULATION SYNDROME (OHSS) IN A CASE OF IATROGENIC PANHYPOPITUITARISM: A RARE CLINICAL PRESENTATION

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Ovarian Hyperstimulation Syndrome (OHSS) is a potentially serious iatrogenic complication of controlled ovarian stimulation (COS) during assisted reproductive techniques. While commonly seen in women with risk factors such as young age, high ovarian reserve and polycystic ovarian morphology, it may rarely occur in patients with hypogonadotropic hypogonadism.

A 24-year-old nulliparous woman with a history of craniopharyngioma excision and ventriculo-peritoneal shunt at 5 years of age subsequently developed panhypopituitarism. She was maintained on pituitary hormone replacement therapy, including growth hormone, cortisol, levothyroxine. She had menstruation with cyclical estrogen–progesterone starting from 13 years of age. At 24 years, she underwent controlled ovarian stimulation using a Step-Up method for fertility treatment, following which she developed moderate OHSS.

The patient was admitted and managed conservatively as per OHSS management guidelines, with continuation of hormone replacement therapy. She was closely monitored and followed up jointly with the Endocrinology department. Her condition improved without major complications.

Mild OHSS occurs in nearly one-third of stimulated cycles, while moderate–severe forms appear in 3.1–8% of cases, with ~0.3% requiring hospitalization. In this patient, the paradoxical hyper-response despite hypogonadotropic hypogonadism can be explained by ovarian factors—borderline high AMH (4.8 ng/mL) and polycystic ovarian morphology. Elevated estradiol and VEGF-mediated vascular permeability likely triggered hemoconcentration and third-space fluid shift. Her young age, high ovarian reserve, and PCO features placed her at high OHSS risk. Early recognition of these predictors should prompt an individualized, low-intensity stimulation strategy.

This case highlights that even in hypogonadotropic hypogonadism, OHSS remains possible when additional ovarian risk factors coexist, emphasizing the need for tailored stimulation and vigilant monitoring.