

Rare Presentation of Undiagnosed Panhypopituitarism in the Setting of Functional Decline

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CASE DESCRIPTION

An 80-year-old gentleman was admitted after multiple mechanical falls, syncopal episodes, and seizure-like activity in the setting of several months of unexplained functional decline. Work-up was negative for acute intracranial pathology, seizures, or infection and the patient was admitted to an acute rehabilitation facility (ARF).

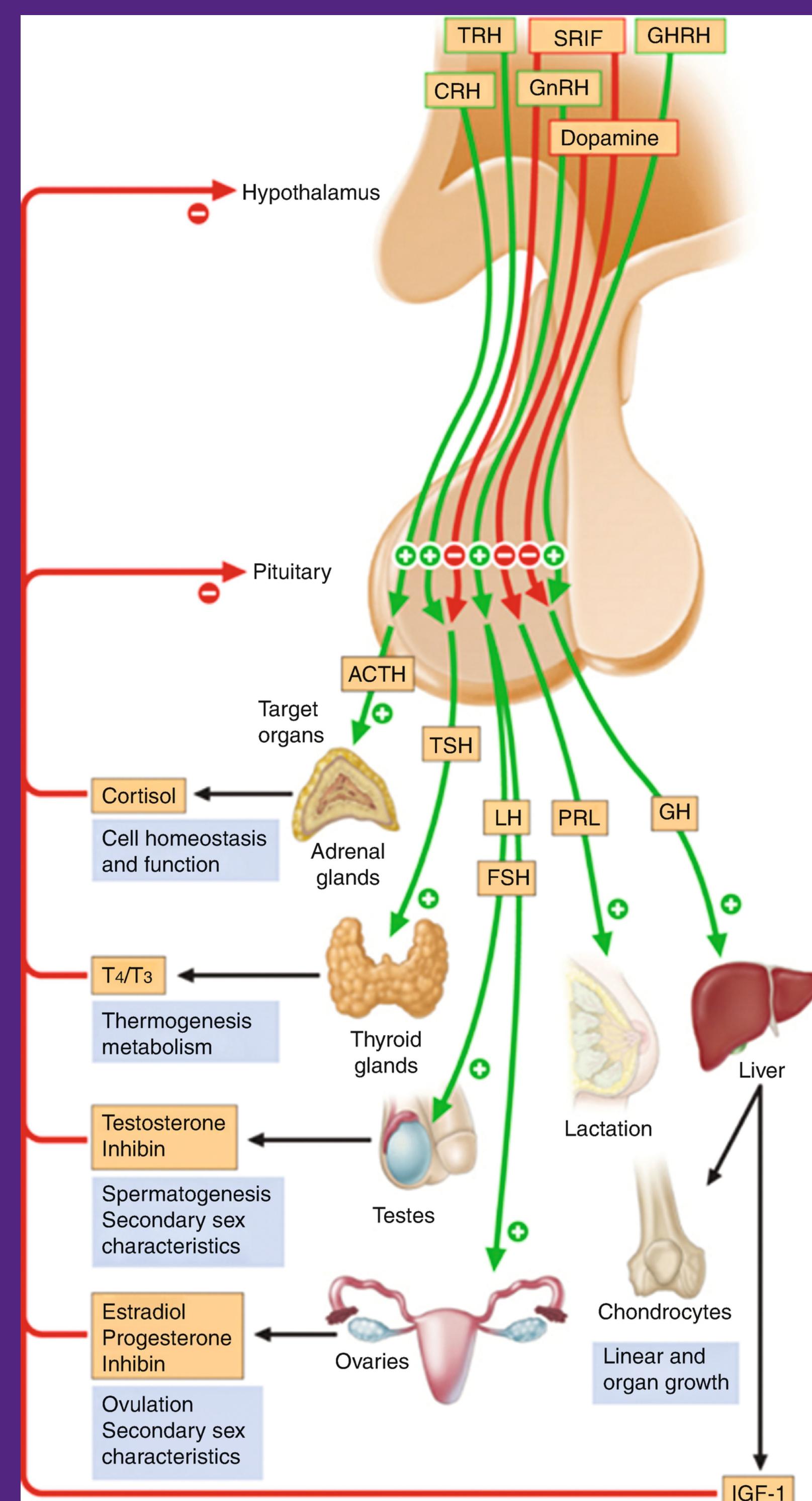
Therapy participation was limited due to poor arousal, attention, initiation, and orientation. His mental status fluctuated, and labs were notable for intermittent hypotension and hyponatremia.

His diffuse weakness and muscle wasting on exam, as well as collateral history from family of suboptimal sexual function prompted a check of testosterone levels, which were found to be profoundly low. Further endocrine work up showed low cortisol and thyroid levels as well, with a failed cosyntropin stimulation test.

The patient was started on prednisone, levothyroxine and testosterone supplementation and subsequently made significant functional gains within his rehabilitation stay, achieving functional status compatible with returning home to his family.

DISCUSSION

Deficiencies of pituitary hormones contribute to a cascade of downstream adverse sequelae, including adverse cognitive and somatic outcomes. ACTH and cortisol deficiency can result in fatigue, weakness, and inability to respond to physiologic stress. Decreased testosterone due to decreased LH can limit muscle mass and hematocrit.



Hormones of the Pituitary Gland

(Image from: Jameson, J. L. (ed.) *Harrison's Endocrinology*, 4th Edition. New York: McGraw Hill Education)

Clinical features of hypopituitarism

Fatigue, lethargy, generalised weakness

Low mood, poor motivation, difficulty with concentration

Reduced appetite, unexplained weight loss or gain

Dizziness (with hypotension, especially postural)

Male: sexual dysfunction, reduced shaving frequency

Female: Oligo-/amenorrhoea, reduced axillary or pubic hair

CONCLUSION

Undiagnosed hypopituitarism can contribute to physical, cognitive, physiologic, and functional morbidity. This can increase the burden of disease, length of stay and overall cost of care across health care settings.

Identifying and managing this treatable disease can significantly reduce morbidity and increase the quality of life for rehabilitation patients by supporting cardiovascular function, optimizing muscle mass, and improving metabolic health.

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