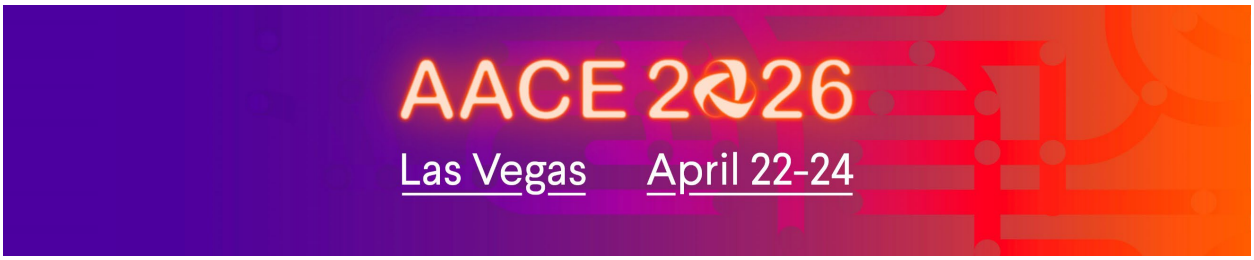


ORIGINAL RESEARCH SCIENTIFIC ABSTRACT EXAMPLE:

Title

Diagnostic Delay in Primary Aldosteronism: A Multicenter Retrospective Study of Time to Diagnosis and Associated Cardiometabolic Outcomes

Objective(s)

Primary aldosteronism (PA) is a common and potentially curable cause of secondary hypertension. However, delayed recognition and diagnosis are frequent and may lead to preventable cardiometabolic complications. The objective is to characterize the time from initial hypertension diagnosis to confirmed PA diagnosis and to evaluate the association between diagnostic delay and clinical outcomes.

Methods / Materials

We conducted a retrospective cohort study across three academic medical centers, identifying adults diagnosed with PA between 2012 and 2022. Demographic, clinical, and biochemical data were extracted from electronic health records. Diagnostic delay was defined as the time from the first recorded elevated blood pressure reading to formal PA diagnosis.

Outcomes included presence of resistant hypertension, number of antihypertensive agents, incidence of atrial fibrillation, and chronic kidney disease (CKD) stage at the time of diagnosis. Statistical analyses included multivariable regression to assess associations between diagnostic delay and outcomes, adjusting for age, sex, and comorbidities.

Results

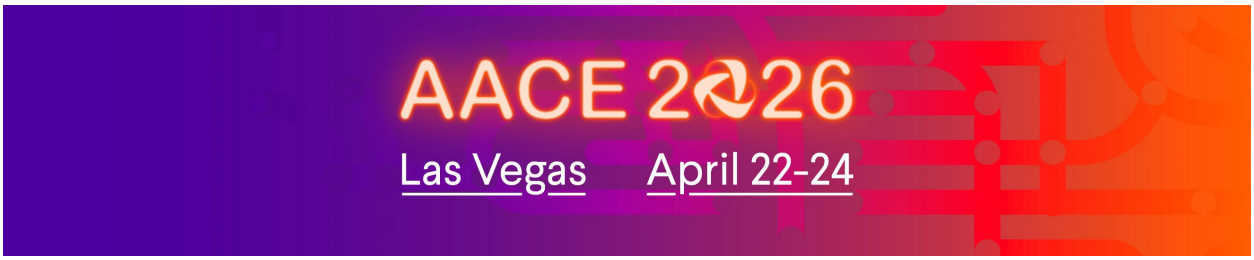
A total of 314 patients with confirmed PA were included (mean age 52.7 ± 10.8 years; 58% female). Median time to diagnosis was 5.4 years (IQR 2.7–8.6). Longer diagnostic delay was significantly associated with increased odds of resistant hypertension (OR 1.12 per year delay; 95% CI 1.04–1.21, p=0.003) and atrial fibrillation (OR 1.09 per year; 95% CI 1.02–1.17, p=0.01). Patients with delays >7 years had a higher mean number of antihypertensive medications (3.2 vs 2.5, p=0.01) and more advanced CKD (stage 3 or higher: 34% vs 18%, p=0.02).

Discussion/Conclusion

Our findings highlight a substantial delay in diagnosing PA, often spanning several years. This delay is associated with a higher burden of resistant hypertension, atrial arrhythmias, and renal dysfunction—

complications that may have been mitigated with earlier recognition. The study underscores a critical gap in screening and diagnostic practices for secondary hypertension.

Delayed diagnosis of primary aldosteronism is common and associated with adverse cardiometabolic outcomes. Efforts to promote earlier screening among patients with hypertension could reduce long-term complications and improve patient care.



CASE STUDY/CASE SERIES SCIENTIFIC ABSTRACT EXAMPLE:

Title

Reversible Hypopituitarism in a Young Woman With Lymphocytic Hypophysitis Presenting During Early Pregnancy

Introduction:

Lymphocytic hypophysitis is a rare autoimmune inflammation of the pituitary gland, most commonly affecting women during late pregnancy or postpartum. We present an unusual case of hypophysitis manifesting in early pregnancy, leading to panhypopituitarism and reversible pituitary dysfunction.

Case Description:

A 28-year-old woman in her first trimester of pregnancy (9 weeks gestation) presented with worsening fatigue, dizziness, nausea, and severe orthostatic hypotension. She had no significant medical history and was not taking any medications. Physical examination revealed hypotension (BP 80/50 mmHg) and signs of volume depletion.

Laboratory evaluation showed hyponatremia (Na 127 mmol/L), low morning cortisol (2.1 µg/dL), suppressed ACTH (<5 pg/mL), low free T4 with inappropriately normal TSH, low IGF-1, and undetectable gonadotropins and estradiol. Prolactin was normal. MRI of the pituitary revealed an enlarged, homogeneously enhancing gland with a thickened stalk, but no discrete mass or hemorrhage, consistent with lymphocytic hypophysitis.

She was diagnosed with panhypopituitarism due to presumed autoimmune hypophysitis. She was started on hydrocortisone and levothyroxine, resulting in rapid symptomatic improvement. Pregnancy continued uneventfully. At 6 months postpartum, a repeat MRI showed normalization of pituitary size. Hormonal testing showed recovery of adrenal and thyroid function, but persistent hypogonadotropic hypogonadism.

Discussion/Conclusion:

This case highlights a rare presentation of lymphocytic hypophysitis in early pregnancy, resulting in transient hypopituitarism. Although most cases occur in the third trimester or postpartum period, clinicians should consider hypophysitis in pregnant patients presenting with nonspecific symptoms and evidence of pituitary hormone deficiencies.

MRI findings and clinical context can help distinguish hypophysitis from other sellar pathologies. Early recognition and hormone replacement are critical to prevent adrenal crisis and optimize maternal-fetal outcomes. Reversibility of pituitary dysfunction supports the autoimmune nature of the disease, though long-term hormonal follow-up is essential.

This case contributes to growing awareness of variable presentations of hypophysitis and the importance of maintaining a high index of suspicion during pregnancy.