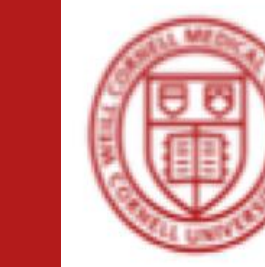


Dilutional Danger in Labor: A Case of Severe Peripartum Hyponatremia

Sophia Wu MD¹, Connor Singrey MD¹, Joe Bryant-Huppert MD¹, Sharon Abramovitz MD¹

¹ Department of Anesthesiology, Weill Cornell Medicine, New York-Presbyterian Hospital, New York, NY



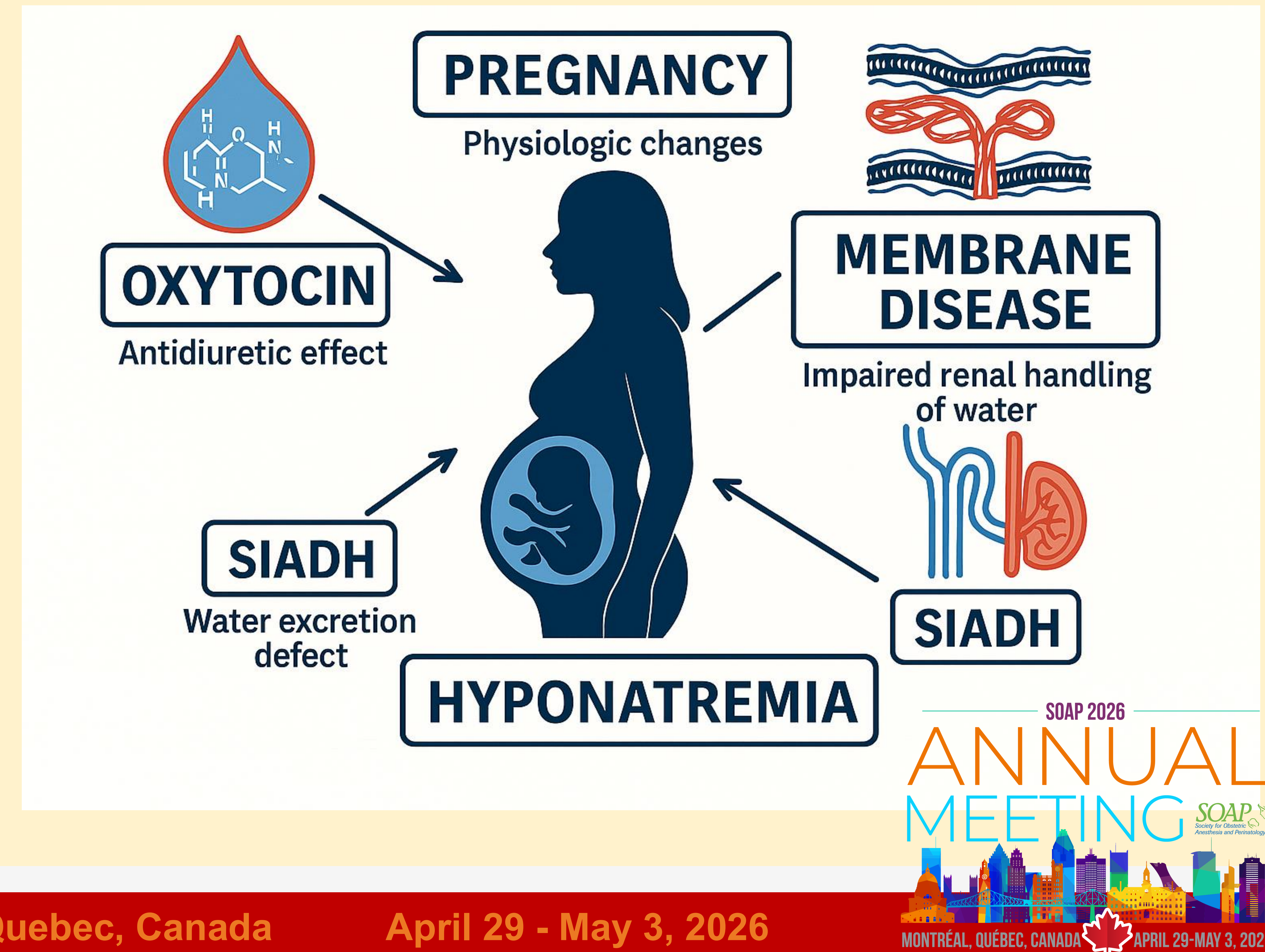
Weill Cornell Medicine



New York-Presbyterian

Introduction

- Peripartum hyponatremia affects ~3/100,000 pregnancies (excluding preeclampsia) and is associated with maternal morbidity
- Oxytocin causes antidiuresis via V2 receptors, inducing SIADH and dilutional hyponatremia
- Pregnancy lowers the osmotic threshold for ADH release, increasing susceptibility
- TBMN affects $\geq 1\%$ of the population, usually benign but may impair renal function
- Multi-hit physiology of SIADH, TBMN, and oxytocin not previously described before



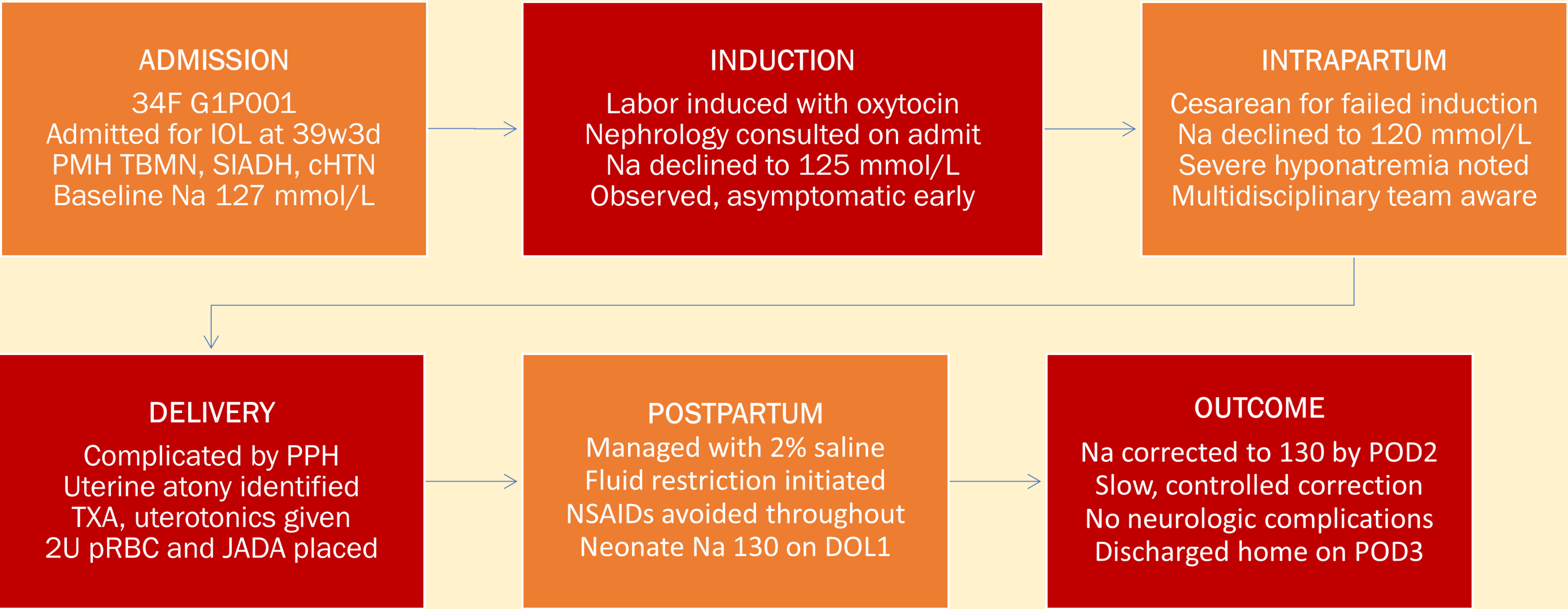
Dilutional Danger in Labor: A Case of Severe Peripartum Hyponatremia

Sophia Wu MD¹, Connor Singrey MD¹, Joe Bryant-Huppert MD¹, Sharon Abramovitz MD¹

¹ Department of Anesthesiology, Weill Cornell Medicine, New York-Presbyterian Hospital, New York, NY



Case Presentation



Dilutional Danger in Labor: A Case of Severe Peripartum Hyponatremia

Sophia Wu MD¹, Connor Singrey MD¹, Joe Bryant-Huppert MD¹, Sharon Abramovitz MD¹

¹ Department of Anesthesiology, Weill Cornell Medicine, New York-Presbyterian Hospital, New York, NY



Discussion & Key Points

Category	Contributor	Mechanism / Risk
Hormonal	Oxytocin	Antidiuretic effect via V2 receptors → free water retention
Physiologic	Pregnancy	Lower osmotic threshold for ADH, dilutional state
Renal	SIADH (pre-existing)	Impaired free water excretion, chronic hyponatremia
Renal	TBMN	Reduced renal reserve during physiologic stress
Iatrogenic	Fluids, uterotonics, transfusions, NSAIDs	Variable sodium content, large volume resuscitation, stress response
Perinatal	Neonatal sodium exposure	Maternal hyponatremia affects neonatal sodium balance

- Pregnancy and oxytocin increase susceptibility to hyponatremia
- Chronic SIADH and renal disease reduce intrapartum safety margins
- Na correction requires slow, carefully controlled management
- Medications/infusions (Oxytocin, Azithromycin, Mg) are often diluted in NS, which can worsen hyponatremia
- Maternal hyponatremia risks neonatal hyponatremia and neurologic injury

References:
1. Pillai A et al. BJOG. 2025. PMID: 40511476
2. Adrogue H et al. JAMA. 2023. PMID: 37851876
3. Savige J et al. Kidney Int. 2003. PMID: 12969134
4. Uzzo M et al. Nephron. 2023. PMID: 36882005

