University of CINCINNATI | next lives here

Urgent Cesarean Delivery in a Patient with Newly Diagnosed Pulmonary Hypertension at 34 Weeks

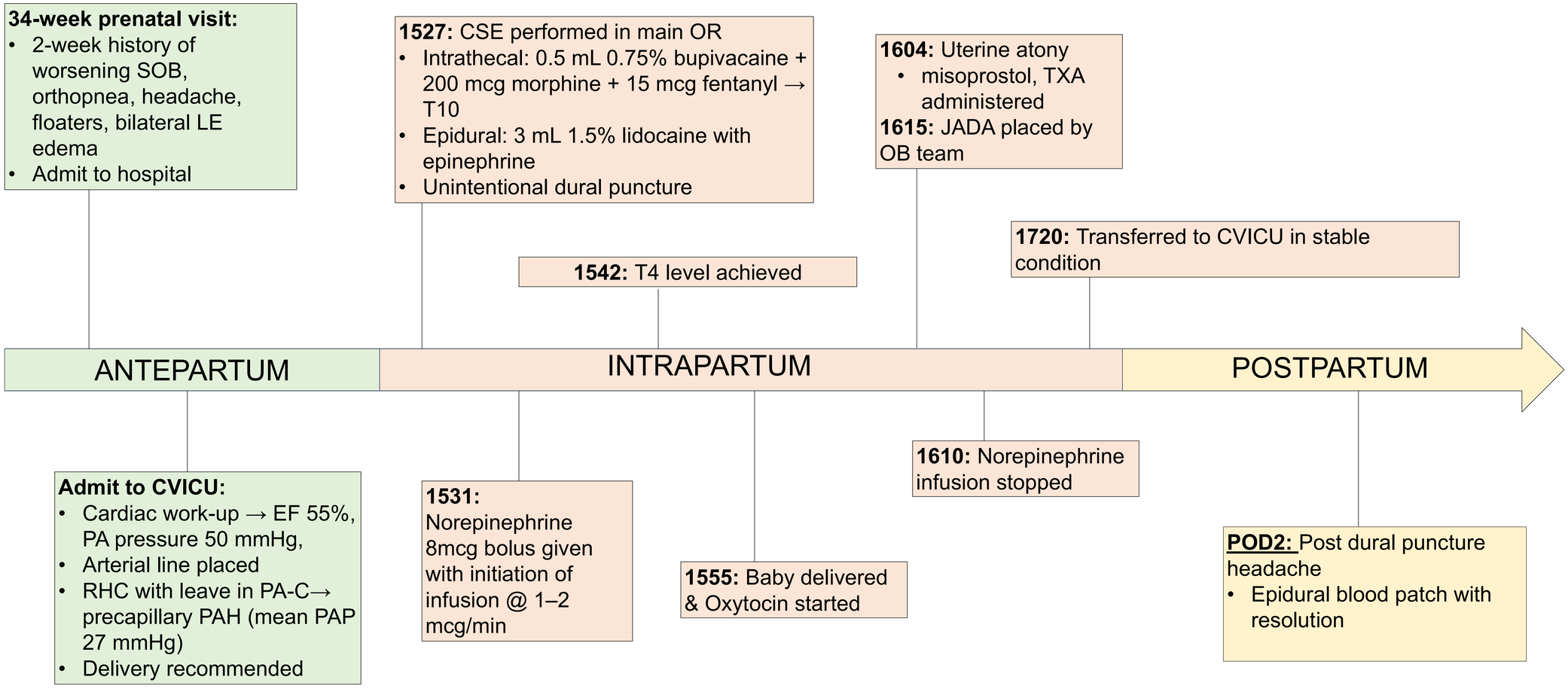
Paxton Walton MS, Devin Dimitrov CRNA, Michael Stacey CRNA, Tyler Guidugli DO

Background

- Cardiovascular disease is a leading cause of maternal mortality in the US (Chen et al., 2025)
- Pulmonary arterial hypertension (PAH) increases risk of cardiopulmonary complications (Kariyawasam & Brown, 2023)
- Patients with preeclampsia and PAH are at further risk of complications
- Anesthetic management of such patients must account for these risks

No disclosures to report.

36-year-old G2P1 with newly diagnosed PAH in the setting of preeclampsia with severe features and volume overload requiring cesarean delivery at 34 weeks



Teaching Points

University of CINCINNATI | next lives here

	Antepartum	Intrapartum	Postpartum

Cardiac 	• Determine PAH severity and RV function
	• Optimize pulmonary vasodilator therapy
	• Multidisciplinary team: OB, cardiology, anesthesia, ICU, CT surgery, pulmonology, ECMO team
	• Contcontingency planning:
	  • ECMO (or acute RV failure)
	  • PPH
	  • Postpartum decompensation
		• Hemodynamic goals: minimize PVR, maintain SVR, preserve RV function
		• Hemodynamic monitoring and vascular access (CVC or PA-C, large bore IV access, arterial line)
		• Contingency plans:
		  • ECMO
		  • PPH
			• ICU monitoring minimum 24–48 hours
			• Ongoing assessment for:
			  • RV failure
			  • Sepsis
			  • Hemorrhage
			  • Thromboembolism

Medications 	• Review and/or plan vasoactive medications • Plan anticoagulation cessation if necessary • Coordinate neuraxial timing	• Continue pulmonary vasodilators • Inotropes for RV support • Norepinephrine, caution with vasopressin • Avoid phenylephrine • Methylergonovine and carboprost ⬆ PVR • Consider avoiding labetalol due to (-) inotropy • Judicious fluid management	• Tailored inotropic and vasopressor support • Resume long-term anticoagulation • Breastfeeding implications
Location 	• Referral to specialized centers • Vaginal delivery vs Cesarean Delivery • Labor in ICU vs labor floor • Cesarean delivery on L&D or main OR	• OR or hybrid OR for high-risk patients • Ensure immediate access to advanced cardiac support	• ICU • Labor and Delivery
Other 	• Assess neuraxial candidacy early • Assess for physiologic changes of pregnancy induced decompensation	• Combined spinal epidural with low-dose spinal and incremental epidural dosing • Avoid single-shot spinal • GA only if unavoidable or decompensation • Assisted second stage	• Coordinate neuraxial catheter removal with anticoagulation timing • Contraception counseling